# ETF-SUNCETT MA Short Course Programme 2020-2021

# **Tracey Lee**

# Education is the passport to the future, for tomorrow belongs to those who prepare (*for online teaching*) today.

Online teaching skills and mindset: how the further education (FE) sector responded to COVID-19.



C

## Tracey Lee 2021

# Contents

Abstract	2
Introduction	3
Literature review	4
Research methods	9
What did I plan to do?	10
Ethical considerations	10
What I hoped would happen	11
Data analysis	12

Key findings	19
Recommendations and closing thoughts	21
Appendix	22
References	34

# Abstract

#### #BeMoreEastwood

Should we all aspire to be good like Clint Eastwood (The Good, the Bad and the Ugly, 1966) or are there still merits to be found in the bad and the ugly? Who decides, and if having decided on some measure of *good*, can we then ensure any consistency across an FE college?

Before the COVID-19 pandemic, DoE reported that "11.9 million (22%) of adults in the UK do not have essential digital skills they need for life" (DoE, July 2019). FE colleges have a responsibility to prepare and support students of all ages and abilities for employment and life (Skills for Jobs: Lifelong Learning for Opportunity and Growth, 2021). This research seeks to identify how the sector is performing against five key areas of opportunity with an emphasis on skills and mindset.

Pre-March 2020 it wasn't unusual to hear a lecturer utter, "I don't do tech". Some tried, but lost confidence when things didn't go to plan. Others lacked confidence to attempt incorporating digital tools to their teaching practice. When it came to annual appraisals, there was limited

emphasis on assessing or developing digital skills. From a teaching observation perspective, it was considered *good* to some extent if teachers used Kahoot or Quizizz. When teaching went online with very short notice, 'I don't do tech' wasn't an option. Teachers had to learn how, and quickly.

Participants in this research include the wider FE sector and in-depth findings from seven teaching staff. Research findings show that teacher efficacy and confidence are key to supporting any notion of *good* online teaching and learning, supporting my strong belief that teacher confidence and mindset play a vital role in the success of online education.

Keywords: online teaching, online learning, online teaching skills, teacher mindset, teacher confidence

Tracey Lee | Abingdon and Witney College |

# Introduction

Firstly, apologies to Malcolm X for taking liberties with his well-known quote in the report title, although a lack of preparedness will become obvious as a result of this research.

Technology works best in education when strategically introduced by skilled and confident staff, (DoE, 2019). This research project seeks to determine what skilled and confident FE staff look like and how this positively impacts the performance of the individual practitioner, learners and the organisation.

As a result of COVID-19, teachers had to adapt their practice for online teaching quickly, without knowing what *good* looked like. Irrespective of digital technology knowledge and ability, some embraced the *new normal* more effectively than others; some looked for innovative ways to deliver lesson content and others tried to replicate the classroom experience. There was no blueprint to follow, and it is possible learners had a different experience depending on the skills and mindset of teaching staff. Walden University states that a great online teacher is technologically skilled, "being comfortable working within a school's online learning management system." (www.waldenu.edu) which is subjective and brings us no closer to

defining what good looks like.

## Literature review

Some teachers embraced the challenges and opportunities presented by the pandemic, while others ranged from hesitant to reluctant. This literature review will consider what constitutes good teaching, relative to online or offline (traditional) as appropriate.

#### Good teaching

What teachers know, do and care about accounts for about 30% of a student's achievement (Hattie, 2003). The highest variance after students (50%) is teachers (see figure 1.), thus their impact must be exceptional; "excellence in teaching is the single most powerful influence on achievement".

Figure 1.

#### Percentage of Achievement Variance



Is excellence to be strived for when there are many different definitions (Brusoni et al, 2014, p. 12)? Expert teaching can be hard to substantiate, with "no consensus in the literature of what expert teaching might be" (Brant, 2006). Good teaching is likely to be a combination of the following, demonstrated at different times; great teachers will demonstrate all of these (Coe, Aloisi, Higgins and Elliot Major, 2014):

Figure	2.
1.	(Pedagogical) content knowledge (Strong evidence of impact on student outcomes)
2.	Quality of instruction (Strong evidence of impact on student outcomes)
3.	Classroom climate (Moderate evidence of impact on student outcomes)
4.	Classroom management (Moderate evidence of impact on student outcomes)
5.	Teacher beliefs (Some evidence of impact on student outcomes)
6.	Professional behaviours (Some evidence of impact on student outcomes)

The pandemic had a huge impact on teachers as they were forced to transition to teaching online almost overnight, in addition to the impact on their personal lives; "struggles and feelings experienced at the very beginning of the first wave of the sudden shift online." (Jandrić, P., Hayes, D., Truelove, I. et al., 2020) and many were found to be lacking: "it can be challenging to train or to find the unicorn teacher who both excels in bricks and mortar instruction...and has the tech savvy it takes...to deliver high quality, engaging, synchronous instruction'. (Lemov, 2020). Though the mention of unicorns is amusing, Lemov makes an important and valid point. Teaching online requires that teachers engage with underlying threshold concepts of online teaching. Although various research was conducted prior to March 2020 these concepts, see figure 3. (Northcote et al, 2016) and the TPACK framework (Mishra, P. and Koehler, M. 2006) were not widely known or discussed among FE practitioners.

Figure 3.

Table 1. Threshold concepts, attitudes and skills identified in Phase 3 of the study

Threshold concepts about online teaching

- Online courses can be designed to facilitate interactivity (between students, teachers, resources, and other experts) by including interactive resources, activities and assessment tasks.
- · Learning can be facilitated in online courses by a skilled online teacher.
- · An understanding of the institutional and technological support that is available.
- · The capacity to conceive of how a student may navigate through an online course.

Threshold attitudes about online teaching

- Good teaching can occur online.
- Students can engage meaningfully in online learning contexts.
- Confidence in designing online courses.
- Confidence in teaching online.
- · Increasingly positive about the introduction of online learning at this institution.

#### Threshold skills in online teaching

- Can login to and access own courses.
- Can create e-resources and e-activities.
- Can manage the assessment process online (setting up tasks, instructing students how to submit, accessing assessment tasks, marking assessment tasks, distributing feedback about assessment tasks).
- Can set up and modify an online course (e.g., adding headings, resources, activities, assessment tasks, graphics,
- · Can identify a purpose for a forum, and then set up and manage an online forum.
- Can track student activity in an online course.

Figure 4.

"An online teacher must create a coherent learning experience for students with whom they may not meet face-to-face and, therefore, must develop new support strategies that maintain motivation and encourage interaction." (Bennett, Lockyer, 2004)

It is interesting to note that inclusion of technology in pedagogy was considered by some to further complicate teaching (Koehler, Mishra and Cain, 2017), rather than offer opportunity or posit that education should evolve. One Higher Education (HE) college writes of transitioning into online education since 2016 (Gosselin et al, 2016), providing them with a significant opportunity to observe the "learning curve of academics moving into online education". Was the FE sector behind the curve?

Pre-2020, the absence of consideration and application of learning theories was, "most noticeably absent in decisions relating to the integration of technology in the classroom, with little evidence that teachers consciously employ principles of learning theories to inform those decisions" (Bailey, 2018); relied on more for admin and communication tasks than instructional

teaching (Kopcha, 2012) and used, "as an expensive substitute for textbooks and chalkboards" (Williams, 2016). Fast forward to March 2020 when online teaching became a necessity and teachers began throwing all manner of digital tools at their students without considering how each one supported learning; romanticising technology (Bransford, Brown, & Cocking, 1999), believing it to be a panacea (Bailey, 2018), while others identified many barriers (Rosalina, Nasrullah and Elyani, 2020). To summarise, "There are many ways to get it right online. Best practice neglects context." (Bayne et al., 2020).

In annual teaching appraisals there was no key focus on the use of technology, the emphasis being on good teaching, learning and assessment, regardless of how this was achieved. One could argue that is what we should be aiming for, but how does this encourage and support 'skilled, and confident staff', (DoE, 2019) in the use of technology in education? Based on a research report by Jisc published in September 2020 (Ghurbhurun, 2020), "There are too few providers in the UK whose staff have the technical expertise, support and vision to realise the potential of digital technology in teaching practice." see figure 5.

#### Figure 5.

"Some teachers do not have the adequate technological knowledge or confidence to make full use of such technology."

"We timed one of the lecturers on how long it took for them to access the learning materials they needed and it took 35 minutes of a two-hour lesson."

Students surveyed cited "help teaching staff to develop digital skills" as one of the main solutions. The Jisc research concluded that teacher confidence is also key.

#### **Confidence and Mindset**

In research by Mojavezi and Tamiz (2012), teacher self-confidence is defined as "the extent to which a teacher is confident enough to his or her ability to promote students' learning." If we make the assumption that digital skills and pedagogy can be learned, does good online

performance start therefore with high levels of teacher self-efficacy (Bandura, 1994) combined with strong motivation realised through self-actualisation (McLeod, 2014)?

7

Rogers' (1959) five characteristics of a fully functioning person leads with being open to experience, both positive and negative, followed by willingness to avoid prejudgment. Sounds easy, but what of a well-informed schema (Piaget, 1952)? What if every time a teacher attempts

to use digital technology it ends in a negative experience that they perceive as failure?

We know that perception is stronger than fact, that it "molds, shapes, and influences our experience of our personal reality" (Estrada, 2020) and that "Knowledge, skill and prior attainments are often poor indicators of subsequent attainments because the beliefs that individuals hold about their abilities and about the outcome of their efforts powerfully influence the ways in which they will behave" (Pajares, 1996). Can teachers shake off the sense of 'Panic-gogy' as defined by Morris et al (Kamenetz, 2020) and move to a positive, open-minded state that sees failure as an opportunity for growth; a state of mind that refuses to transform "an action (I failed) into an identity (I am a failure)", (Dweck, 2006, 2016).

For me, the TPACK model (Koehler, 2012) is missing important content. Teachers can be competent in all seven components, but if they lack confidence or a willing mindset to trial and embed technology into their teaching practice they are unlikely to master digital pedagogy beyond the basics.



#### 8 Research methods

Research will be conducted directly with a sample group of staff volunteers and learners from one college and indirectly with the wider FE sector.

Figure 7.

Figure 6.

Research group Online	Focus Questionnaire group	1-2-1 interview
Sample group ✓ ✓		$\checkmark$
Learners 🗸		
Wider FE sector ✓		

The sample group will consist of a minimum of six participants, (maximum 10) identified through an All Staff email invitation. Participants will be given two weeks to complete the questionnaire; a poll to identify a mutually convenient date and time will be issued for the focus group and the 1-2-1 interviews arranged directly. The focus group will last one hour and the 1-2-1 interviews 30 minutes each. Each participant will invite 4-6 of their learners to take part in the research. The wider FE sector will be targeted via Twitter and LinkedIn to complete the questionnaire.

This project is mainly focused on collecting data using qualitative research methods in order to understand how individuals think and feel about teaching and learning online; qualitative research highlights any nuances between the individuals involved (Hall, R., Harvey, L.A., 2018) and allows for personal perspective; a humanistic approach (Kalra, Pathak and Jena, 2013). It also provides an opportunity to identify any trends (McNiff, 2013). Different research methods have been chosen and a mixture of structured, semi-structured and unstructured approaches used because "triangulation of results from multiple approaches can yield more reliable and valid conclusions" (Rogelberg, 2015) and can add "rigour and depth to analysis" (Cowman, 2018).

The focus group will be asked to respond to three questions, with no prior knowledge of the questions, to encourage spontaneous contributions. The meeting will be conducted according to components of the Thinking Environment (Kline, 2020). As such, participants will have no opportunity to respond to, or engage directly with each other. When one participant is speaking, others must practice generative attention; and they may not interrupt. It is hoped this will

discourage people from only waiting to talk (Frye, 2016). Lesson observations providing insight into human behaviour (Cowman, 2018) will be unstructured. The 1-2-1 interviews will be semi-

structured, providing space for reflection, allowing thoughts to surface: "The flexibility of this approach, particularly compared to structured interviews, also allows for the discovery or elaboration of information that is important to participants but may not have previously been thought of as pertinent by the research team." (Gill, Stewart, Treasure and Chadwick, 2008).

The research does not differentiate between disadvantages of teaching and learning online *per* se and the impact of pandemic fatigue (Millard and Danielle Murphy, 2021).

## What did I plan to do?

No one envisaged that lockdowns and COVID-19 related restrictions and subsequent implications would be in place for so long. It became apparent in late 2020 that initial research plans would need revising as I was struggling to get any participants on-board. Initially I had planned to conduct the practical research aspect of this project over a six month period, January-June 2021. I had planned for a minimum of six participants in the sample group and for each of those participants to invite 4-6 learners to take part in the research. However, teaching staff were under pressure due to their unexpected involvement with Teacher Assessed Grades and were also struggling to get learners engaged in lessons, which took priority. Diary clashes meant that it was not possible to observe participants teaching online. Based on participant feedback, plans were revised to focus only on teaching staff and the wider FE sector. An expectation was set and agreed that participants would complete one questionnaire and attend a focus group. Taking part in a 1-2-1 interview was not obligatory. All research activity was transferred online using MS Teams and Forms.

#### **Ethical considerations**

BERA Ethical Guidelines (2018), the Data Protection Act (2018) and UK GDPR (2018) have all been considered in relation to data protection and guidance followed. Participants will be provided with details about the study and a consent form with the option to withdraw at any point. Participants' identity is kept confidential and they will be referred to using alphabetic characters. Data gathered in the focus group and during interviews will be shared with participants for further comment or amendment before the report is submitted. Participants will give permission before any digital recording takes place. Any data sourced via social media will

be anonymous. The participant selection methods ensure lack of bias and by opening up participation to the wider FE sector will encourage a more diverse demographic. The research

will be shared with the college Senior Leadership Team for additional comment before the report is submitted. Research is conducted in line with the college's ethical guidelines and safeguarding procedures.

# What I hoped would happen

I hoped the outcomes would clearly identify areas of progress and similar strengths and weaknesses in relation to teaching and learning online to help inform continuous professional development. In particular I was keen to identify the role of mindset (Dweck, 2006) and hoped the research would support a move to a blended learning approach beyond the pandemic. There were no surprises to the contrary.

#### Questionnaires

The questionnaires provided an opportunity to collate quantitative and qualitative data.

#### Sample group

One participant (14%) had been teaching for less than five years and 57% over 15 years:

#### Figure 8.



#### Wider FE sector (107 responses)

A much larger sample, so we would expect to see smaller variability. However, still 40% of participants have taught over 15 years and 27% between 15-25 years.

#### Figure 9.



Of the sample group, those teaching over 25 years (29%) were among the least confident in March 2020, rating themselves 1-2. Of the wider FE sector group 70% of those teaching over 25 years rated themselves 1-2, compared with 35% of those teaching 10-15 years. Both sets of data support a perceived correlation between the number of years teaching and digital skills confidence. It is unlikely that these age groups demonstrated good (Coe et al, 2014) or excellent

(Brusoni et al, 2014, p. 12) teaching with confidence levels compounded by the personal impact of the pandemic (Jandrić, P., Hayes, D., Truelove, I. et al., 2020). However, the average level of confidence was similar in both groups: 2.43% versus 2.68% (based on scoring themselves 1-5, with 5 being highest) suggesting the emergence of 'unicorn' teachers (Lemov, 2020).

When surveyed on the benefits of teaching and learning online, responses ranged from: "Vast - for the learner, opportunities to revisit content (if recorded asynchronous) and go at own pace." to the one respondent who stated "None". Responses from both groups fell into the following main categories (see figure 10):

Figure 10.

- Saves on travel time, increased attendance
- Flexibility, ease of access to lessons live and recorded
- Efficient use of time
- Less disruption; learners arriving late
- Less distraction from peers (learners)
- More opportunity to collaborate
- Learners can work at their own pace, increased opportunity for
- differentiation Allowed for more timely feedback and assessment

Based on figures 11 and 12 (see Appendix 2.) teachers quickly engaged with key threshold concepts about online teaching (Northcote et al, 2019) and demonstrated a keen level of care for students (Hattie, 2003).

Whilst this research aims to identify any self-limiting beliefs from a teachers perspective, the data also highlights this in learners:

Figure 13.

"A few students have self-limiting beliefs about their ability with technology. Some have such limited social engagement elsewhere that they project this need onto college and expect us to provide their social life as well. Some are incapable of accepting that in order to study a subject you need to put effort into learning how to use the technology that it is taught with. A few are incapable of recognising that if they were ONLY being taught at college then there would be a load of skills that they WOULDN'T develop; in just the same way that they claim that there are skills that they can't develop online."

Some teachers "took the same approach and shifted it online" suggesting a lack of awareness or reluctance to explore the components of the TPACK model (Koehler, 2012) or other threshold concepts of online teaching (Northcote et al, 2019). Online pedagogy was adapted throughout the pandemic suggesting higher levels of self-efficacy (Bandura, 1994) and increased confidence, perhaps as a result of learning through failing (Dweck, 2006, 2016). The data shows increased interest and determination, a far cry from panic-gogy (Morris et al) in March 2020 (see figure 14, appendix 3.)

## Focus Group 28.5.21

Five of the sample group attended a focus group. Participants A and C were not able to attend. Three questions were posed and each participant in attendance responded in turn.

Participant ID	Response
F	Teaches a weather dependent (to some extent) subject and initially really loved the idea of teaching differently, of seeing how learners learn differently and how the classroom environment might change. Comparing the first two lockdowns the weather was more of a talking point in the Winter months and made for more of a negative online classroom environment.
D	Had mixed feelings depending on which area of their work was focused on; 1-2-1 or group teaching. Their perception was that communication is harder online, "this is going to be really awful because I can't do all of the things that are interactive, but it's not been as bad as I expected and at times it's actually worked better online."
E	"Saw lockdown as being a huge opportunity to try out" and support learners to develop various ways of teaching online resulting in having a "bigger tool kit" to teach online and on campus.
G	Thought "online teaching would be much more difficult, hadn't tried it before" and actually embraced it. "I really, really, love it."
В	Felt they yo yoed between it being totally different to anything they'd ever done before, to it being absolutely the same. "It's much better than I ever thought it could be for learning." The flip side being it is less effective in terms of building learning relationships; distractions are more and opportunity to connect less. It has highlighted the importance of social connection within groups of learners beyond restrictions imposed by the pandemic.

# What does good online teaching and learning look and feel like for you and the learners?

#### Figure 16.

Participant ID	Response
E	"It should not look or feel like any other teaching."

G	Key to the success of each session is keeping things "simple and clear." Teaching online gives access to tools which the participant used to validate all learner contributions. Teachers need to be confident with technology and presentation.
В	Clarified what they thought <i>good</i> looked like and stated their belief that there is no difference overall between online and face to face lessons.
F	In their role as Course Leader defined <i>good</i> as "hitting target grades." Overall, they defined <i>good</i> as happiness, equating happy learners with commitment to their course and success. Lessons need to have a "positive vibe", whole class cohesion and shared ownership of learning targets, the same as when learning in person. Focusing on and encouraging learner imagination has helped with success of online learning.
D	The <i>feel</i> of each session; positive, collegiate environment and good level of engagement, is "the fundamental" that underlines good online teaching and learning in the context of adult learners working in very small groups. Willingness to adapt.

# How can the college support teaching staff to achieve good online teaching and learning?

i igaio i i i
---------------

Participant ID	Response
G	TSA, drop in sessions, connecting with others as result - value of being able to do this, wouldn't have happened without lockdown (not possible geographically) Sharing good practice.
В	It's a cycle. 1) to have a clear picture of what it is, "maybe some kind of definition", 2) self-assessment supported by review, "observation type feedback", 3) support through various channels.

F	Widespread trust, support and ability to share and discuss ideas widely. Obs Idea: record teaching sessions, reflect with other members of the team on each other's teaching sessions. Triangulated feedback/development
D	Teacher triangles, using video, guidance and support (Digital L team) develop further with videos of good T&L. Getting feedback from Peers, time for PtoP observations

E "We've shown we can do it" so continued support and promotion of continued online T&L to build on the "very precious tool kit" we've developed during the pandemic. That online opportunities highlighted for some learners are "not lost." Lots of other opportunities to support flexibility of courses and better respond to learner needs. Let's "not throw out T&L baby with the bathwater."

#### Freshest thinking

- D value of listening and more thinking
- E I want to go and observe Participant F!
- G New family learning course about questioning
- B Valuing each other, and how we can all do this better
- F It's okay not know, but it's important to set standard of work ethic

#### 1-2-1 Interviews

The same five questions were posed to each participant:

Figure 18.
------------

Questi on numbe r	Question
1.	What barriers have you overcome since teaching went online?

2.	Can you describe an experience of teaching online that didn't go as well as you hoped and what your learning was from that experience?
3.	Practical subjects and access to robust WiFi and computers aside; what do you think is the biggest drawback of teaching and learning online?
4.	How can curriculum design and development support the use of digital technologies to improve learner engagement and encourage active learning?
5.	Can an organisation future-proof blended learning? If so, how?

See Appendix 2 for responses. Participant B was unable to take part in a 1-2-1 interview. 18

# **Key findings**

FE teachers were not sufficiently prepared or supported to teach online in March 2020, which echoes the Jisc report findings (Ghurbhurun, 2020). When teaching was forced online a lack of confidence was most prevalent in those teaching over 25 years. However, combined data showed the average level of confidence was 52%, suggesting the sense of 'Panic-gogy' (Morris et al, 2020) was real for some, irrespective of age. Teacher self-efficacy (Bandura, 1994) levels

were low, and many teachers viewed themselves as having failed at their early attempts.

Lack of access to adequate technology and robust WiFi was highlighted repeatedly. It is concerning that the use of technology in education is *still* highly variable and that digital capability and skill barriers identified in 2017 were still prevalent in March 2020, some three years later (DoE, 2019).

Combined data shows that average levels of confidence rose in April-May 2021 to 88%, an increase of 69% in approximately 14 months, which could be the result of college intervention. However, most participants seek opportunities outside of their college to develop their online teaching skills, so it is difficult to attribute the increased confidence levels. Similarly, 14% of the wider FE sector are not aware if their college offers training to develop online teaching skills. More information is needed to confirm if this is a communication issue or lack of provision.

Initial barriers to overcome were summed up by participant A, who described them as "threefold: confidence, expertise, and knowhow." The absence of being able to read body language, to replicate the immediacy of in-person interactions was seen as a big barrier to relationshipbuilding. Despite this, most teachers are keen that online teaching and learning continues beyond restrictions enforced by the pandemic and the concern now is that newly developed skills and confidence will not be developed further and hard lessons learned will be lost as teachers return to campus: "We've now got a different baby in the bathwater and one we shouldn't lose or 'throw out with the bathwater'." (participant E); "Nervous that online will all be withdrawn because it's 'easier'. Easier for who? Learner feedback has been so positive, that this could all be lost is worrying." (participant G). The same concern exists in the FE sector: "the rose-tinted glasses are on and the 'back to normal' assumptions have started." (Mycroft, 2021).

The data shows that perception altered (Estrada, 2020) as teachers and learners became accustomed to working online. Mindset, attitude, and approach to online teaching all improved,

19 increasing teacher self-confidence (Mojavezi and Tamiz (2012). There is now less romanticising of technology (Bransford, Brown, & Cocking, 1999) and increased focus on online pedagogy, improving on the findings by Bailey (2018).

Good online teaching was not clearly defined beyond: "It should not look or feel like any other teaching." (participant B). Thus the model by Coe at al (2014) still applies and defines skilled and confident teaching staff.

My hypothesis was confirmed to some extent in terms of skills and confidence, although I was surprised to find that even the most experienced teachers struggled to some extent at the beginning of the pandemic. I did not expect to identify an appetite for regular forums to discuss pedagogy and research at Abingdon and Witney College and am excited to discuss how this could be developed.

# **Recommendations and closing thoughts**

Figure 19.

1.	The research data and conversations on various social media platforms highlighted a lack of consistency within the FE sector in terms of training and support provided for online teaching. In terms of the sector, my recommendations are to encourage more cross-college sharing of good online teaching practice, perhaps in the same way as the Research College Group does to encourage and support practitioner research in FE.
2.	The full data set provides rich and useful insight into what teachers think and feel about online teaching and learning, far more than can be included in the data analysis. There are distinct differences between classroom and online environments, both of which require specific skill sets. Being able to clearly identify what skills and mindset are required to support ongoing development of teaching staff is essential if a college is to be sufficiently agile and able to adapt to the fast moving pace of online teaching and learning. All emphasis on staff development should enhance the college's reputation as an employer of choice. For this reason I recommend that online pedagogy is included as a separate focus (area) on Personal Development Plans (PDP) and a 12-month detailed training and development plan outlined as a result of discussion at the PDP meeting. The objective of the plan would be to ensure relevant, individual and developmental support, which should positively impact the learner experience and help position colleges as the FE provider of choice in the local area.
3.	Host a quarterly pedagogy/research forum to discuss and share project outcomes. This would help break down any barriers associated with mindset linked to research and help inform teaching practice across the college. Practitioner research is invaluable and something in my opinion, that all teaching staff should be keen to do on some level, even the smallest research project is useful.

The FE sector should feel proud of what has been achieved over the last 18 months. This research shows that many practitioners transferred teaching online with limited experience combined with barriers outside of their control. Skills were quickly developed and confidence improved. To echo some of participants' voices, it is vital that these new-found skills and confidence levels are not allowed to slip; that the sector and individual colleges continue to invest in technological architecture and provide the necessary training and on-going support to ensure that practitioners remain competent in online pedagogy.

# **Appendices**

Appendix 1. Consent and information document for participants

# **Participation Consent Form**

#### Study title: ETF/SUNCETT Research Programme 2020-21

Working title: Teaching and Learning online - the good the bad and the ugly

Participant code: \_\_\_\_\_

- · I am over the age of 18 (insert box for participant to initial)
- I have read and understood the attached study information and, by signing below, I consent to participate in this study
- I understand that I have the right to withdraw from the study without giving a reason at any time during the study itself.
- I understand that I also have the right to change my mind about participating in the study for a short period after the study has concluded, i.e., 2 weeks after attending the testing session.

Signed: \_\_\_\_\_

Print name: \_\_\_\_\_

(Your name, along with your participant code is important to help match your data. It will not be used for any purpose other than this.)

Date: \_\_\_\_\_

#### SUNCETT Research Programme 2020-21

Working title: Teaching and Learning online - the good the bad and the

#### ugly What is the purpose of the study?

Technology works best in education when strategically introduced by skilled, and confident staff, (DoE, 2019). This research project seeks to determine what 'skilled and confident staff' in the area of online teaching and learning looks like in an FE (further education) college, and how this positively impacts the performance of the individual practitioner, learners and the organisation.

#### Who can take part in the study?

Teaching staff and learners from Abingdon and Witney College will form the main sample, although the wider FE sector may also be surveyed.

#### Do I have to take part?

Participation is entirely voluntary. If you change your mind about taking part in the study, **you can withdraw at any point during the session without giving a reason and without penalty**. After you have completed the study, you can also withdraw your consent for your data to be included by contacting me via email **within 2 weeks of participation** and providing me with your participant code. The participant code will be given to you after you have consented to take part in the study. If you decide to withdraw during the study or in the subsequent two-week period, your data will be destroyed and will not be used in the study.

#### What will happen to me if I take part?

You will be:

1. Expected to complete a maximum of two surveys between April-July 2021 2. Expected to attend one, one-hour focus group between May-June 2021 3. Invited to one 1-2-1 interview lasting approximately 30 minutes with Tracey Lee

In addition, you will be asked to encourage a minimum of four learners to complete one

survey. Please also refer to the Ethics statement provided.

#### What are the possible disadvantages and risks of taking part?

There are no foreseen disadvantages or risks to you by your participation in this

#### study. What are the possible benefits of taking part?

- Opportunity for reflection, to highlight own progress since March 2020 and areas for development
- · Peer learning and support

#### What if something goes wrong?

If you change your mind about participation, please contact me by email to cancel your participation. If you feel unhappy after the study, please contact me immediately.

#### Will my taking part in this study be kept confidential?

Only other teaching staff taking part in this research will be aware of your active involvement (e.g., you will meet at the focus group).

#### What will happen to the results of the research study?

If suitable, the results may also be presented at academic conferences and/or written up for publication in peer reviewed academic journals.

#### Who is organising and funding the research?

The Education and Training Foundation in association with University of Sunderland.

#### Who has reviewed the study?

The University of Sunderland/SUNCETT personnel have reviewed and approved this research project.

#### **Contact for further information**

Tracey Lee

Email:

Phone: providing my personal number as I won't be back teaching on campus until Sept '21.

Appendix 2.

Figure 11.

#### Sample group responses (verbatim)

Ease of access for the learner - no need to travel. Offers extra flexibility of delivery model - can be synchronous or asynchronous to meet needs. Develops digital skills in teacher and learners. Encourages use of more digital tools to support teaching and learning that have had lasting impact and benefits to the learning process.

I have found there are great benefits to learning online - particularly to the type of learners that I meet in family learning. These can be parents who would often not be available to attend a physical course - due to time and travelling logistics, or because of childcare issues or work issues. There are also parents who feel more confident to attend an online course where they can choose whether to turn on their camera and when they feel ready to participate with their voice. I have also found learning online attractive for myself. It is much easier to organise and take notes (and screenshots) during both live and pre-recorded training sessions. It is more comfortable sitting at your own desk in your own chair, rather than in a physical environment where the facilities may be lacking. For me, this means that the experience is a more pleasurable one - and probably that I am learning and retaining more as a result.

Learners who find it difficult to travel to campus are not disadvantaged, I can work with people over a greater distance if necessary. For some learners it is a less threatening environment and at the moment safety for myself and others is a paramount consideration with Covid-19. Benefits also include greater use of a variety of apps that have brought more variety into lessons and have pushed us into using these to replace what would have been hands on kinaesthetic individual or group tasks.

Clear communication and ability to produce creative ideas in a different context

Firstly, it has made me more mindful of my teaching approaches; an opportunity to pause and reflect. Fewer distractions than the classroom. In some ways, easier to ensure everyone is engaged more often, e.g., it is easier to monitor them, plus there are often virtual or online tools that mean that can all participate (for example answering a question) at the same time.

Convenience, efficiency, instant communication with all learners group and individual, can reach anywhere connected to the internet in the world! Some learners who struggle in class positively bloom online!

As long as you adapt the pedagogy to work online, then the benefits, as I have experience them are: students can learn in mixed groups, cross campus; resources can be accessed easily and lesson recorded; learners can flex there learning around their lives; learners can control the pace and revisit material in their own time; efficiencies can be made and instant feedback opportunities created using digital tools; learners have VLEs and chat functions which enables them to ask questions, support each other and contribute in new ways.

Figure 12.

Selection of additional comments in response to the benefits of teaching and learning online

Hear from every voice, create more engaging content

If delivered correctly and imaginatively, the anonymity can enhance engagement.

Shy, anxious and unconfident student's can fully participate. Behaviour and focus is generally improved. Students can go back to revisit learning.

Once you have suitable access the benefits are endless. (Internet or device) Inclusivity - e.g access immersive reader. Many quieter learners in class used the chat function more.

Easier Creation & distribution of resources Automated marking/assessment - re-do/re-attempt for Ss Different methods of feedback - verbal/video/annotation & links to further learning on study Accessibility tools available to learners - MS have really shown how accessibility tools can be integrated into a suite of apps (Immersive Reader in Edge is a revelation!)

no stigma about looks/clothes between students

Flexibility Reach a wider range of students (potentially)

Where to begin...? Time - I save 80 minutes commuting each day; Exercise - which means that I get a 3-mile walk that I wouldn't otherwise have; Multi-tasking - being much easier to handle other things compared to being in a classroom all the time. MUCH easier to have confidential one-to-ones without having to leave the room. Greater individual rapport. Improves access for students with dependents, carers, dogs, etc. (This week I had the first-ever class attended by a one-week-old baby - mum would simply not have attended in college.)

I've found there's been some great ways to introduce topics and allow space for reading and reflection.

Lie in, slippers...

In my instances the benefits have been clear for learners with social anxiety or who are diagnosed as being in the autistic spectrum.

-faster access to resources online
-better for the environment (no traffic/driving/printing/paper)
-capturing learners with children (easier for school runs)
-can record lessons/better for those who missed a class (whatever reason-broadband/illness/kids etc) -everything is being stored in one central location (Teams)
-instant sharing
-remaining in touch often rather than seeing each other in centre only

For teachers it's probably things like ease of reusing once the material is there.

Students take more ownership of their learning.

Easier sharing of docs. Much easier to have 121 conversation in breakout rooms

Some SEN students find it easier as less distraction for them.

Appendix 3.

Figure 14.

I use PowerPoints now to help direct the lesson - I wasn't a fan before

Collaborative methods for engagement

I have utilised all of the amazing technological pedagogical tools we had at our disposal but I knew nothing about prior to lockdown number 1. I've overcome my own barrier of thinking I couldn't do all the 'fancy tech stuff'.

Live lessons mixed with recorded sections works well. I have adapted my model so that learners have more independent working time.

It initially was very teacher-centred but I have tried to encourage more group work as learner confidence in breakout rooms grew. Lack of device has been an issue for some learners (I try to test all resources on phones as well as my laptop first). I try to set tasks to do in advance so that the video meeting can be more a discussion or sharing of ideas.

Discussions are harder, as learners tend to respond just to me or see me as the one managing discussion. This requires careful planning. I have been able to give learners more options for how they can meet their learning objective e.g. verbally, writing, images, quizzes, assignments, videos, presentations etc as my face-to-face classrooms usually have limited IT resources as they are in community venues like children's centres or schools. We have been loaning Kindle tablets to learners without devices and have developed induction sessions to teach learners IT skills so that this is no longer a barrier.

A lot. Materials are more complete (capable of genuinely being followed without my help (ie it isn't just a case of "here's the PowerPoint you missed!") My 'lectures' are recorded in 10-minute max videos. These would have taken 40 minutes to work through in-class - now the students can listen (ideally beforehand) and we can do more practical stuff in the 'classroom'. They can also re-watch if they feel inclined to do so. It isn't a proper flipped classroom, but it's closer. I find it easier to use targeted questions with individual learners, and it's harder for people to hide - though I'd like it if there was a way of seeing more on-screen.

Planning is different, I don't try and do the same thing, recognising different techniques needed. Still using visuals and dual coding but in different ways. Using the chat box instead of mini whiteboards for formative assessments. Simplifying discussions by using one or two open questions because I can't be in all break out rooms at once.

Thinking much harder about curriculum design and what content can be designed asynchronously: live time holds a different purpose - collaboration, discussion, interaction.

Questi on numbe r	Participant ID	Participant response summary
1.	A	Felt the barriers to overcome were three-fold: confidence, expertise and knowhow. Logistical and practical issues, reliability of WiFi. Initially disruptive, but as time went on we all got into a flow, we trusted each other a little bit more to sit in the call and wait for technical issues to be resolved. Lack of opportunity to build relationships (offline) prior to college courses starting had a negative impact.

Appendix 4. 1-2-1 interviews

С	The need to go online quickly was the catalyst for me learning new stuff. At first (lockdown one) I was teaching Maths, not my subject or comfort zone. Had made it very experiential in the classroom. Online lessons were optional, I developed a framework: quiz, content, independent task; I played safe. Just getting people there was the main objective, over "are they learning?". Coming back in New Year (2021), I developed a formulaic lesson plan and also reviewed valuable advice from the TSA and Digital Team. This led me to consider if learners were engaged online; how did I know? Following discussion with the Quality Lead I realised my formula had become a barrier in itself - it inhibited learner progress, I wasn't thinking about cause & effect, which was an epiphany! Peer observation was useful and I adapted my teaching practice as a result. Access to technology (learners) was a barrier, especially for those who had to use a mobile phone. Not being able to see learners who for whatever reason did not have cameras on made interaction challenging.
D	Main barrier was equipment, and didn't initially have access to all Teams functions. Took over an online course and had never taught online before. Did so in October 2020 when other teachers were all au fait with teaching online and it felt there was an expectation that I would also be au fait with it and know what I was doing. I don't think that assumption wasn't very helpful.
E	Learner confidence, learners feeling wary about the teaching process online. Barrier to begin with but sense of everyone being in the same boat, at the same time. As trainers/teachers we were learning, as were

	the learners. Technical aspects, able to engage online effectively. Overcome well through research into the issue. Supporting each other, showing things can go wrong (and that there is usually a way
	round it) encouraged confidence.

	F	Pedagogy, knowing how to teach online. Had no training in teaching online. Difference in teaching and learning from home, as opposed to being on campus. Students were able to see that teachers don't have all of the answers all of the time. Challenge of creating a positive environment online, unable to rely on body language. Trusting my ability to teach outside of the classroom. Didn't know what distractions were happening in student homes.
	G	Course promotion wasn't possible in the same way and admin tasks were greater; I worked far harder during lockdown. Lecturer job descriptions are the same irrespective of responsibilities and don't reflect hours worked.
2.	A	Being observed. When you're in the room it's easier to adapt in the moment. I found it a lot more difficult to react to the difficulties in front of me and unable to know what is going on in the background, e.g. how do we know if learners are engaged/focusing on the lesson?
	С	Over planning is a weakness of mine and can mean learning doesn't go deep. Online, I felt less confident and able to adapt easily (beginning of lockdown). Pace online is much slower. I rushed the content, which derailed the lesson. My learning was to plan exit points.
	D	First session I delivered the internet kept shutting things down. I panicked, which would never happen in the classroom, I just panicked. I didn't persevere, nor did I seek assistance from the learners, something I would do in the classroom. It was a really interesting learning curve. I didn't use teaching strategies I'd used for years. My learning was to rely on these.
	E	My Surface wasn't reliable in the evening after being used all day. Initial reaction, panic! Not my usual serene swan persona, people saw me paddling like mad, at times it felt almost like people were under the water

		with me. I learned to be open with people, acknowledge when something isn't quite right, deal with it and return. Second lesson, don't rely 100% on tech! Always have a Plan B.
	F	Maintaining my '5 minutes early rule' which allows time for anything to go wrong. E.g., computer updates stopped people arriving on time for lessons. I started the call earlier to set an example and was a bit more forgiving.
	G	In general it's gone really well. WiFi has let me down. Have set up three screens to help and WiFi has let me down three times in one week. Very stressful as I had to move all three screens during the lesson.
3.	A C	Where teaching is wholly online, developing those relationships. Staff who saw students in person had tangibly, visibly stronger relationships. Not all students had confidence or social skills or were articulate enough to put their point across with enough clarity when being taught solely online. Add to this the lack of willingness to have cameras on and the ability to develop relationships is hindered by exclusive online teaching.
		Absence of human interaction. 1-2-1 dialogue okay, but adding more people to the mix dilutes ability to read the room, use emotional intelligence. Absence of non-verbal communication biggest drawback and not seeing their work 'live'. Have to plan strategy for feedback.
	D	Without a doubt the interactions with group activities and the windfall learning that comes from that.
	E	Not seeing the learners, not being able to interact. Missing out on body language signals. Teacher voices can be very flat/monotone online which impacts student engagement and energy. Nuances are lost, 2D dimensional versus 3D.

F	The personal touch. Ability to look them in the eye, over their
	shoulder, make sure they're really understanding, that they're
	smiling/happy with what they're doing. Important to progress
	academically, but the most important part is that they are happy -
	happy learners will engage and want to learn. Students were more
	reserved online (suspect parent pressure), and questioned him.
	Interaction was less dynamic. Not as

		30
		much fun. Cameras off didn't help and teachers couldn't disprove claims of 'camera isn't working'.
	G	The participant felt this had been answered in question 2.
4.	A	Thinking of teaching subjects like Health and Social Care, Early Years and Public Services where it is about working with people in-person a lot of the time. Online learning was quite often a lot more focused. Certain types of students thrived with online learning and all students were able to have their voice heard online choosing from a variety of options ensuring a happy marriage between in-person and online teaching. Going forward, making sure students all have access to appropriate hardware (one student was doing everything on a mobile phone) and adequate training to access a wide range of online tools. time. Online learning was quite often a lot more focused. Certain types of students thrived with online learning and all students were able to have their voice heard online choosing from a variety of options ensuring a happy marriage between in-person and online teaching. Going forward, making sure students all have access to appropriate hardware (one student was doing everything on a mobile phone) and adequate training to access a wide range of options ensuring a happy marriage between in-person and online teaching. Going forward, making sure students all have access to appropriate hardware (one student was doing everything on a mobile phone) and adequate training to access a wide range of online tools.
	С	Consider what needs to remain online versus on campus. What makes learning more accessible? E.g., doing tutorials and assessment online and recording so learners can transcribe, refer to and act on feedback to help learning. Creative work, using digital portfolios as standard. Creative industries expect to see online evidence.

D	Implementing virtual environments (augmented reality) would be amazing!
Ш	We've now got a different baby in the bathwater and one we shouldn't lose or 'throw out with the bathwater'. Lockdown has catapulted us into a digital age that perhaps we wouldn't have reached for another 6-18 months. I think further online teaching and learning should be encouraged where it's relevant. We've learned many new tools and I think we should develop the use of these further and also continue to

	31
	develop digital skills. Teaching online has revolutionised some people's teaching; brought some people into the 21st Century. Used effectively, tools support active learning by enhancing retrieval practice and encourage learner ownership of their own learning. Learner engagement - helps identify progress in learning. Need continued support of SMT regarding use of digital technologies in curriculum design, which includes time for research.
F	I'd like to see the Digital Team do more during Induction about online learning (opportunities/benefits). The <i>why</i> of online learning, outline skill development (highlighting transferable skills) as a result, positioning learning online as a massively positive as opposed to something we have to do. development (highlighting transferable skills) as a result, positioning learning online as a massively positive as opposed to something we have to do.

5.	G	Continue opportunities to connect with departments like the TSA. I had worked in a vacuum previously. Being able to access regular training was fantastic! Great to be able to share/discuss teaching practice with others too in online forums.
	A	Not sure you can. We don't know what the future is going to look like. Getting multiple perspectives, ensuring we're not under-staffed, giving ourselves reserves of time and money. Ensuring that we're physically and mentally adept enough to react to those things we can't predict.
	С	Don't think you can future proof anything. You can be preparing for change. Help learners to be resilient, adaptable, ready for change and life long learners, teaching <i>the way</i> we learn and <i>how</i> to learn. Harness what has accelerated over last few years and changed the way we do things for the better and to continue to innovate.
	D	By investing in equipment and people. Hybrid/blended learning is a must /valuable. Ongoing training for staff, opportunities to share online teaching practice (to build confidence), create a culture of 'it's okay not to know and to ask'. Invest in enough Digital Champions across the college.

F	Yes, I think they can future proof online learning (remotely and on campus). Reflect on the needs/ability of students and decide which medium works best. Don't default to everything being done in the classroom.
G	Nervous that online will all be withdrawn because it's 'easier'. Easier for who? Learner feedback has been so positive, that this could all be lost is worrying. Delivering sessions online has meant that more people can attend - learner feedback supports this (a breast-feeding mother and someone with mobility issues are just two examples) - so it could widen appeal, increase funding. Cuts down hugely on travel time and costs for everyone. Sufficient investment in technology is important as not all staff can afford to invest in their own technology like I have.

# References

2021. *Skills for Jobs: Lifelong Learning for Opportunity and Growth*. 1st ed. [ebook] Available at: <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/</a>

file/957856/Skills\_for\_jobs\_lifelong\_learning\_for\_opportunity\_and\_growth\_\_web\_version\_.pdf> [Accessed 3 October 2021].

Bailey, E., 2018. *Constructivism and Future Self-Efficacy: Student Teachers' Confidence in Applying Learning Theories to Computer Technology*. 1st ed. [ebook] https://www.researchgate.net/. Available at:

<https://www.researchgate.net/publication/330443274\_Constructivism\_and\_Future\_Self-Efficac y\_Student\_Teachers'\_Confidence\_in\_Applying\_Learning\_Theories\_to\_Computer\_Technology> [Accessed 15 April 2021].

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), Encyclopedia of human behavior (Vol. 4, pp. 71-81). New York: Academic Press.

Bayne, S., Evans, P., Ewins, R., Knox, J., Lamb, J., Macleod, H., O'Shea, C., Ross, J., Sheail, P., Sinclair, C. and Johnston, K., 2020. *The manifesto for teaching online*. 1st ed.

Massachusetts: MIT Press, p.7.

Bennett, S. and Lockyer, L., 2004. Becoming an Online Teacher: Adapting to a Changed Environment for Teaching and Learning in Higher Education. *Educational Media International*, [online] 41(3), pp.231-248. Available at: <https://www.tandfonline.com/doi/abs/10.1080/09523980410001680842> [Accessed 3 October 2021].

Bransford, J., Brown, A. and Cocking, R., 1999. *How people learn*. 1st ed. Washington, D.C.: National Academy Press.

Brant, J., 2006. Subject knowledge and pedagogic knowledge: ingredients for good teaching? An English perspective.. 1st ed. [ebook] Available at: <https://core.ac.uk/download/pdf/82407.pdf> [Accessed 28 July 2021].

34

Brusoni, M., 2014. *THE CONCEPT OF EXCELLENCE IN HIGHER EDUCATION*. 1st ed. [ebook] Brussels: European Association for Quality Assurance in Higher Education, p.12. Available at:

<https://www.enqa.eu/wp-content/uploads/2014/09/The-concept-of-Excellence-in-Higher-Educat ion.pdf> [Accessed 3 October 2021].

Coe, R., Aloisi, C., Higgins, S. and Elliot Major, L., 2014. *What makes great teaching?*. 1st ed. [ebook] Available at:

<https://www.suttontrust.com/wp-content/uploads/2014/10/What-Makes-Great-Teaching-REPO RT.pdf> [Accessed 28 July 2021].

Cowman, S., n.d. *Education Under Observation*. [online] https://www.inmo.ie. Available at: <https://www.inmo.ie/Article/PrintArticle/1841> [Accessed 2 October 2021].

Dweck, C., 2016. Mindset. 2nd ed. New York: Ballentine Books, p.8.

Estrada, J., 2020. *How your perception is your reality, according to psychologists | Well+Good.* [online] Well+Good. Available at: <a href="https://www.wellandgood.com/perception-is-reality/">https://www.wellandgood.com/perception-is-reality/> [Accessed 19 September 2021].</a> Frye, D., 2016. *Are You Really Listening, or Just Waiting to Talk*?. [online] Psychology Today. Available at:

<https://www.psychologytoday.com/gb/blog/the-right-balance/201610/are-you-really-listening-or just-waiting-talk> [Accessed 2 October 2021].

Ghurbhurun, R., 2020. *If we don't upskill teachers in digital skills, learners will suffer*. [online] Jisc. Available at:

<https://www.jisc.ac.uk/blog/if-we-dont-upskill-teachers-in-digital-skills-learners-will-suffer-30-no v-2020> [Accessed 19 September 2021].

Gill, P., Stewart, K., Treasure, E. and Chadwick, B., 2008. Methods of data collection in qualitative research: interviews and focus groups. *British Dental Journal*, [online] 204(6), pp.291-295. Available at: <a href="https://www.nature.com/articles/bdj.2008.192">https://www.nature.com/articles/bdj.2008.192</a> [Accessed 27 July 2021].

GOV.UK. 2019. *Realising the potential of technology in education*. [online] Available at: <a href="https://www.gov.uk/government/publications/realising-the-potential-of-technology-in-education">https://www.gov.uk/government/publications/realising-the-potential-of-technology-in-education</a>> [Accessed 1 September 2020].

35

Hall, R. and Harvey, L., 2018. Qualitative research provides insights into the experiences and perspectives of people with spinal cord injuries and those involved in their care. *Spinal Cord*, [online] 56(6), pp.527-527. Available at: <a href="https://www.nature.com/articles/s41393-018-0161-4">https://www.nature.com/articles/s41393-018-0161-4</a> [Accessed 27 July 2021].

Hattie, J.A.C. (2003, October). Teachers make a difference: What is the research evidence? Paper presented at the Building Teacher Quality: What does the research tell us ACER Research Conference, Melbourne, Australia. Retrieved from http://research.acer.edu.au/research\_conference\_2003/4/ - *recommended citation*, accessed 18.4.21

Jandrić, P., Hayes, D. and Truelove, I., 2020. *Teaching in the Age of Covid-19*. Postdigital Science and Education Book Series. [online] https://link.springer.com/. Available at: <a href="https://link.springer.com/article/10.1007/s42438-020-00169-6">https://link.springer.com/article/10.1007/s42438-020-00169-6</a>> [Accessed 28 July 2021]. Kalra, S., Pathak, V. and Jena, B., 2013. Qualitative research. *Perspectives in Clinical Research*, [online] 4(3), p.192. Available at: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3757586/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3757586/</a> [Accessed 2 October 2021].

Kamenetz, A., 2020. 'Panic-gogy': Teaching Online Classes During The Coronavirus Pandemic. [online] Npr.org. Available at:

<a href="https://www.npr.org/2020/03/19/817885991/panic-gogy-teaching-online-classes-during-the-coronavirus-pandemic?t=1632062703514">https://www.npr.org/2020/03/19/817885991/panic-gogy-teaching-online-classes-during-the-coronavirus-pandemic?t=1632062703514</a> [Accessed 19 September 2021].

Kline, N., 2020. *The Ten Components - Time to Think*. [online] Time to Think. Available at: <a href="https://www.timetothink.com/thinking-environment/the-ten-components/">https://www.timetothink.com/thinking-environment/the-ten-components/</a> [Accessed 2 October 2021].

Koehler, M., 2012. *TPACK Explained*. [online] TPACK.ORG. Available at: <a href="http://matt-koehler.com/tpack2/tpack-explained/">http://matt-koehler.com/tpack2/tpack-explained/</a> [Accessed 19 September 2021].

Koehler, M., Mishra, P. and Cain, W., 2017. *What is Technological Pedagogical Content Knowledge (TPACK)? - Matthew J. Koehler, Punya Mishra, William Cain, 2013.* [online] SAGE Journals. Available at: <a href="https://journals.sagepub.com/doi/10.1177/002205741319300303">https://journals.sagepub.com/doi/10.1177/002205741319300303</a> [Accessed 2 October 2021].

Kopcha, T., 2012. Teachers' perceptions of the barriers to technology integration and practices with technology under situated professional development. *Computers & Education*, [online] 59(4), pp.1109-1121. Available at:

<https://www.sciencedirect.com/science/article/abs/pii/S0360131512001352?via%3Dihub> [Accessed 28 April 2021].

Lemov, D., 2020. *Teaching, Technology and Surviving the New Normal.* 1st ed. New Jersey: Jossey-Bass, p.28.

McLeod, S., 2014. *Carl Rogers Theory*. [online] Simplypsychology.org. Available at: <a href="https://www.simplypsychology.org/carl-rogers.html">https://www.simplypsychology.org/carl-rogers.html</a> [Accessed 19 September

2021].

McNiff, J., 2013. Action research. 3rd ed. Abingdon, Oxon: Routledge, p.106.

Millard, E. and Danielle Murphy, L., 2021. *How to Not Let Pandemic Fatigue Turn Into Pandemic Burnout | Everyday Health*. [online] EverydayHealth.com. Available at: <https://www.everydayhealth.com/coronavirus/how-to-not-let-pandemic-fatigue-turn-into-pande mic-burnout/> [Accessed 9 September 2021].

Mishra, P. and Koehler, M., 2006. *Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge*. 1st ed. [ebook] Columbia: Teachers College, Columbia University. Available at:

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.523.3855&rep=rep1&type=pdf> [Accessed 28 July 2021].

37

Mojavezi, A. and Tamiz, M., 2012. (*PDF*) *The Impact of Teacher Self-efficacy on the Students' Motivation and Achievement*. [online] ResearchGate. Available at: <https://www.researchgate.net/publication/266459581\_The\_Impact\_of\_Teacher\_Selfefficacy\_o n\_the\_Students'\_Motivation\_and\_Achievement> [Accessed 28 July 2021].

Mycroft, L. (2021) Twitter 26 February. Available at: https://twitter.com/LouMycroft/status/1365209185865117697 - accessed 3.10.21

Northcote, M., Reynaud, D., Kilgour, P., Anderson, M. and Boddey, C., 2016. *Development of an Evidence-based Professional Learning Development of an Evidence-based Professional Learning Program Informed by Online Teachers' Self-efficacy and Threshold Program Informed by Online Teachers' Self-efficacy and Threshold Concepts Concepts*. 1st ed. [ebook] ResearchOnline@Avondale, p.9. Available at:

<https://research.avondale.edu.au/cgi/viewcontent.cgi?referer=https://scholar.google.co.uk/&ht t psredir=1&article=1096&context=edu\_papers> [Accessed 28 July 2021].

Pajares, F. (1996). Self-Efficacy Beliefs in Academic Settings. *Review of Educational Research*, *66*(4), 543–578. https://doi.org/10.2307/1170653

Piaget, J., & Cook, M. T. (1952). *The origins of intelligence in children*. New York, NY: International University Press.

Rogelberg, S., 2015. *Handbook of research methods in industrial and organizational psychology*. Hoboken: Wiley, p.Chapter 8.

Rogers, C. R. (1959). A theory of therapy, personality, and interpersonal relationships as developed in the client-centered framework. In S. Koch (Ed.), *Psychology: A study of a science, Formulations of the person and the social context* (Vol. 3, pp. 184–256). New York: McGraw-Hill.

Rosalina, E., Nasrullah, N. and Elyani, E., 2020. Teacher's Challenges towards Online Learning in Pandemic Era. *LET: Linguistics, Literature and English Teaching Journal*, [online] 10(2), p.71. Available at:

<a href="https://www.researchgate.net/publication/348597977\_Teacher%27s\_Challenges\_towards\_Onl">https://www.researchgate.net/publication/348597977\_Teacher%27s\_Challenges\_towards\_Onl</a> i ne\_Learning\_in\_Pandemic\_Era> [Accessed 2 October 2021].

*The Good, the Bad and the Ugly.* 1966. [film] Directed by S. Leone. Italy, Spain, West Germany: Produzioni Europee.

Waldenu.edu. n.d. *six-traits-to-look-for-in-a-stellar-online-teacher*. [online] Available at: <a href="https://www.waldenu.edu/online-masters-programs/ms-in-higher-education/resource/six-traits-to-look-for-in-a-stellar-online-teacher">https://www.waldenu.edu/online-masters-programs/ms-in-higher-education/resource/six-traits-to-look-for-in-a-stellar-online-teacher</a> [Accessed 3 October 2021].

Williams, T., 2016. *Skills in the digital age - how should education systems evolve?*. [online] pp.1.2.3. Available at:

<https://www.researchgate.net/publication/330367576\_Skills\_in\_the\_digital\_age-how\_should\_e ducation\_systems\_evolve/citations#fullTextFileContent> [Accessed 2 October 2021].