



Department
for Education

Evaluation of Strategies for Online Learning Implementation in Further Education

Research report

March 2021

Plumpton College



Government
Social Research

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Executive summary

Background to the project

Plumpton College, Basingstoke College of Technology (BCoT) and EKC Group (EKCG) responded to the Covid-19 emergency by rapidly moving learning online in March 2020. All three institutions identified that whilst staff initially felt confident to do this, the quality of the experience for learners was too variable. Research indicates that this experience was typical of the further education and skills (FES) sector and resulted primarily from a mismatch of learning materials and pedagogy that had primarily been developed for onsite, face-to-face delivery, with the requirements of remote online learning (Joyce, 2020).

To respond to the impact of increased online learning the three institutions formed a partnership led by Plumpton College, and initiated a research and development project to rapidly develop and sustain staff confidence and capability in the:

- effective use of platforms
- development of content for active online learning
- delivery of structured 'live lessons online'

The project ran between November 2020 and March 2021 and progressed through four key phases:

1. Research to establish baseline measures of capability, confidence and satisfaction in online and blended learning. Outputs from this initial research informed 4 workstream development plans.
2. Development.
The partners collaborated to create support materials for platform use and content development for each workstream:
 - a. Criteria to define best practice and minimum expectations for good or better online teaching, learning and assessment.
 - b. Structured staff development programme.
 - c. Study guides for students.
 - d. Methodology/criteria for effective assessment of online learning.
3. Implementation.
Development phase deliverables were tested throughout the partnership and case studies illustrating the impact of these interventions were produced.

4. Evaluation.

Progress was reflected on and measured against initial benchmark position and expected outcomes:

- 75% of staff who have undergone the development meet expected standards in delivering good or better online TLA.
- A minimum 5% increase in student satisfaction against the same criteria compared to the baseline starting point.
- Staff demonstrate enhanced digital confidence: live delivery measures (all staff at least 15%, most staff at least 50% and some staff >75% of online is 'live').

Method

A rapid literature review was undertaken which identified established methods for assessing capability (DigComp 1.0 (Carretero, Vuorikari and Punie, 2017) and the SAMR model (Martin, 2020)) and criteria for good online and blended learning pedagogy. These criteria included principles of good practice (Chickering and Gamson, 1989), and specifically focused on four key considerations:

- Consideration of students' individual technology and network limitations.
- Consideration of the development of community cohesion and a Community of Inquiry.
- Consistency when designing synchronous and asynchronous learning spaces.
- Continuous and frequent assessment for learning.

Data regarding the capability, confidence and satisfaction of staff who teach online and students was collected using surveys at the start and end of the project. Additional quantitative data was collected from observations of online teaching.

The surveys included questions and statements aimed at discovering the constraints and enablements experienced by staff and students with regard to use of adaptive technologies, safeguarding, technical considerations, support, general attitudes to online learning and good pedagogical practice. Survey respondents self-assessed their capability against the DigComp 1.0 framework, staff self-assessed their use of technology following the SAMR model and students were also asked about device usage and network reliability.

In addition to the surveys, 38 semi-structured interviews with staff (one governor, 8 leadership, 4 management, 21 teachers and 4 support staff) and 3 focus groups with 12 students were undertaken at the start of the project. Follow up semi-structured

interviews were also conducted at the end of the project with 4 members of teaching staff at Plumpton College who had been interviewed previously.

When speaking with staff and students, five key themes emerged:

- Understanding students' individual remote learning conditions.
- Adapting to online TLA.
- Use of cameras.
- Building online communities of learners.
- Assessment for learning.

Development

In addition to research into staff and student confidence and capability, the partners undertook three key development activities during the project.

East Kent College Group implemented and evaluated a structured staff development programme. The college's Digital Learning Group devised a programme that uses an iterative loop to inform future staff development programmes. The key elements of this programme include:

- Training and guidance for leaders and managers.
- A 'digital staffroom' for sharing best practice.
- An 'open-door' policy for digital classrooms so that lessons may be recorded and disseminated to demonstrate best practice.
- A reporting system that records completion of Education and Training Foundation (ETF) EdTech modules.
- A rolling CPD package developed and led by Digital Champions.

Evaluation suggests that general satisfaction with the programme and the incorporation of ETF modules.

Plumpton College developed student online study guides which included practical advice on optimising space to learn at home, managing distractions, netiquette and problem-solving. A [draft web site](#) was produced which also includes advice on time management and online research.

Users found the guides useful and informative, and further development is planned to incorporate the advice into the colleges' Aspire programme.

Basingstoke College of Technology established criteria for effective assessment of online learning, and implemented and evaluated an online lesson evaluation programme that included staff self-assessment. They produced two online forms, an Online Assessment Tool (OAT) and a Self-Assessment Tool (SAT), each containing 12 criteria for assessment. The OAT is used by learning development staff to aid their observations of online lessons and provide feedback and action plans to observed lectures. The SAT facilitates lectures' reflection of their capability in the pedagogical use of online learning technology in synchronous settings.

Both forms were found to be useful in identifying areas requiring improvement. Suggested further development includes integrating OAT and SAT outcomes with CPD planning.

Findings

Research findings indicate that there was no improvement in student satisfaction during the timeframe of the project. Despite the best efforts of partners to provide disadvantaged students with appropriate devices and network connections there continues to be a clear digital divide between those students who have reliable network connections and those who do not. Those with reliable connections tended to express satisfaction with learning online, but most students responding to the survey continued to experience technical issues that interrupted their learning.

Accessing online learning may have been compromised by device availability as about a third of students continued to regularly use smartphones throughout the project timeframe. Mobile versions of the communication software used to deliver online lessons may work well in some limited circumstances. However small screen size and the inability to have more than one application running concurrently mean that students who use smartphones as their sole device are not able to fully take part in online lessons.

Survey responses suggest that students are generally satisfied with the support they get from their lecturers and there was a significant improvement in the response time of lecturers answering students' questions outside of lessons. However, some students felt unprepared for online learning and expressed the desire for improved training in the use of communication software and support for learning in this environment.

Comparing staff responses to the first survey with the follow up, there was an improvement in reported staff confidence, self-assessed capability and overall

satisfaction with online learning. Staff reported growing confidence in the use of online learning technologies. Those who engaged in planning online lessons with the assistance of colleagues and selected students reported high levels of student engagement once their lessons went live. Reduced 'teacher talk', and increased social interaction, community building activities, self-directed learning and collaborative tasks were reported to improve student engagement with learning tasks.

While some lecturers identified low or no camera use as a key factor preventing their assessment of student engagement and comprehension, student anxiety regarding camera use was recognised as a significant constraining influence. Those lecturers who de-emphasising camera use and used other methods to judge engagement and progress found that this approach worked well and improved student participation.

Despite evidence of improved confidence and self-assessed capability, survey and lesson observation data suggest that less than half of lecturers who teach online meet expected standards in delivering good or better online teaching, learning and assessment. However, there is some evidence indicating that undertaking CPD in online learning technologies, specifically completion of Education and Training Foundation modules, have a positive impact on online TLA practice.

Recommendations

Project findings suggest the following recommendations can be made:

Improve student support:

- Actively promote good practice guidance to support online studying.
- Provide training opportunities for students to practice using online communication software prior to starting courses.
- Establish the baseline minimum for student hardware and software and audit to ensure compliance with the minimum.
- Provide suitably equipped spaces for 'at risk' students to study onsite using college facilities.

Improve staff development:

- Promote digital skills development across the curriculum.
- Actively promote staff networks that encourage knowledge sharing.
- Carry out regular assessments of staff online learning technology use to inform CPD programmes.

Improve online teaching practice:

- Engage all stakeholders in online lesson design and testing. Ensure consultation includes regular users of assistive technology.
- Emphasise social presence. Model and encourage appropriate sharing behaviour.
- De-emphasise camera use. Assess student engagement via regular and frequent mini assessments, interactive activities, and small group breakout room tasks.
- Ensure staff do not introduce activities which require more than the baseline unless it is for stretch and challenge for specific learners that have the hardware and the software to be able to comply.
- Record online lessons whenever possible and make available for students to catch up or reinforce their learning.

Further study recommendations

- Investigate 'early warning' systems based on interaction data to identify 'at risk' students.
- Investigate the use of digital badges to motivate staff completion of CPD and other training.
- Review and investigate alternatives to current staff networks that encourage knowledge sharing.

Introduction

Teaching, learning and assessment (TLA) using web-based technologies has been part of the educational environment for more than 20 years. While most institutions had developed online learning policies and employed learning technology specialists to support the implementation of these policies, the application of web-based technologies had evolved at a pace guided by government policy (Department for Business Innovation and Skills, 2015) and local needs, and were primarily used to support traditional face-to-face delivery. Thus, within the FES sector Virtual Learning Environments (VLEs) and a variety of blended learning approaches had been adopted in recent years, but the key mode of delivery of level 1 to 5 courses remained predominantly face-to-face.

This diversity of approaches to the adoption of online learning is demonstrated by the experiences of the colleges within the partnership (see Appendix 1 for background information on each college). Each had expertise in the use of technology to support TLA prior to Covid-19. BCoT had integrated Google Classroom (Google LLC, 2021) into their pedagogy and all courses included elements of blended learning, and Plumpton College and EKCG used Moodle (Moodle, 2021) as a repository for teaching resources and course information.

Following the announcement that educational institutions would close from 23 March 2020 (Department for Education and Williamson, 2020) colleges in the partnership moved rapidly to introduce or adapt online methods to continue to deliver TLA to students, most of whom were expected to study from home. EKCG and Plumpton initially tried methods that combined Moodle with internet conferencing software (e.g. Skype (Microsoft Corp., 2021a)) but swiftly transferred to Microsoft Teams for Education (Microsoft Corp., 2021b) which was found to provide a more integrated and useful platform. As BCoT had already implemented Google Classroom throughout the college their adoption of a predominantly online approach went ahead with few disruptions.

The rapid adoption of online learning demanded a great deal of flexibility and resilience from staff as well as students. IT staff and learning technologists were required to meet the support needs of teaching staff and students, some of whom did not have the required devices or network connections to work and study effectively from home. During this early period following the first 'lockdown' announcement, while teaching staff were provided with introductory training in the use of new technologies it soon became apparent that students were struggling to engage with and/or access online lessons. To mitigate this hundreds of laptops and network dongles were subsequently distributed to students.

Throughout this early period – between the March announcement and the start of the new academic year in September - various initiatives were undertaken at a national level to support the deployment of online learning.

In April the Education Endowment Foundation (EEF) undertook a rapid literature review of studies related to online, remote, blended and computer supported teaching and learning (Ellis-Thompson *et al.*, 2020). This review concluded that remote learning can have positive impacts for learners, access to technology was a significant barrier to implementation and quality of implementation positively impacted student outcomes, as did peer to peer interaction.

In May the Department for Education provided pedagogical guidance for remote learning (Department for Education, 2020a) which stated that the fundamentals of effective teaching practice remained the same for online as for face-to-face classroom teaching. The guidance further suggested that teachers design activities that could be easily accessed by learners, including adopting traditional (physical) methods of distributing educational materials, as well as established (digital) online methods. Illustrative case studies provided alongside the guidance were withdrawn in October and replaced with an interactive resource which targeted support at meeting teachers' specific needs (Department for Education, 2020b).

Regular Ofsted inspections were paused when college campuses closed, but at the request of the Association of Colleges (AoC), Ofsted undertook a review of online learning provision where FES students at 20 colleges were asked about their experiences of online learning. Ofsted's findings supported the outcomes of the EEF review, namely that some students reported that the experience was positive, students enjoyed teacher and peer interaction in 'live' lessons and that some students, especially at levels 1 and 2, found it harder to engage with the technology. This initial report also indicated that some teachers' poor pedagogical choices led to students losing interest and becoming disengaged (Joyce, 2020).

Notwithstanding college-based support provided to staff and students and the advice and guidance given by government and national bodies it was acknowledged that, along with most educational institutions, the TLA experience for students within partnership colleges was too variable and that further steps were required to understand relevant issues. This led to the formation of the partnership and the initiation of this project.

Led by Plumpton College and starting in November 2020 the project progressed through four key phases:

1. Research.

To establish baseline measures of capability, confidence and satisfaction 38

semi-structured interviews with staff, 3 focus groups with 12 students and surveys of teaching staff (n=191) and students (n=1401) within the partnership were undertaken. Outputs from this initial research informed 4 workstream development plans.

2. Development.

The partners collaborated to create support materials for platform use and content development for each workstream:

- a. Criteria to define best practice and minimum expectations for good or better online teaching, learning and assessment.
- b. Structured staff development programme.
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3. Implementation.

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- Staff demonstrate enhanced digital confidence: live delivery measures (all staff at least 15%, most staff at least 50% and some staff >75% of online is 'live').

The motivating idea of this project is to gain maximum use and adoption within the FES sector through the dissemination of reports, guides and case studies and the presentation of solutions to similar issues faced by colleagues nationally.

What has been learnt from this project will be disseminated widely across the FES network, including:

- Landex national conference and peer review process.
- South-East Local Enterprise Partnership - Digital Skills Partnership and annual showcase event covering the whole of Essex, Kent and East Sussex.
- Coast to Capital and Enterprise M3 LEP skills groups.
- AoC SE – quality and curriculum events.
- AoC Special Interest Group- Technology.
- EdTech demonstrator through BCoT.

- FE Sussex Principal's Group and Curriculum Group.

Further research and sharing will be achieved through the colleges' continuing professional development programmes (CPDs) which will be encouraged to develop an enduring partnership. The idea is to maintain the focus and enthusiasm for continual research, testing and development before wider roll out via newsletters, reports and academic journals. This approach to fostering continual research and innovation for online pedagogy, together with the rapidly evolving role of online learning will ensure the sustainability of activity initiated by this project.

The operational group identified the following research questions to elucidate the aims and guide the progress of the project:

1. What characterises 'good' pedagogical practice in online and blended learning environments in Further Education?
 - a. Wider research;
 - b. From the perspective of governance and leadership;
 - c. From the perspective of management;
 - d. From the perspective of teaching staff;
 - e. From the perspective of learners.
2. What are the key constraints and enablements to implementing good pedagogical practice in online and blended learning environments in our colleges?
3. What strategies are most effective at improving staff capability and confidence in online and blended learning pedagogical practices in our colleges?

The research phase was initiated which included a rapid literature review, surveys of student and staff confidence, capability and attitudes to online learning, interviews with staff and focus groups with students.

Research

To develop a rich picture of what was happening within the partnership a mixed methods approach was adopted that collected relevant qualitative and quantitative data. Several research activities, including a rapid literature review, surveys of staff and students and interviews with staff, and student focus groups, were carried out to establish baseline measures of capability, confidence and satisfaction. Collected data were then analysed and triangulated with relevant literature. These activities emerged from the project research questions and research findings informed the four workstream development plans.

Rapid literature review

This review of relevant literature will primarily examine the main issues surrounding RQ1a, the characteristics of good pedagogical practice in online and blended learning environments. Research questions 1b-e, 2 and 3 deal specifically with the experience of partnership colleges and are mainly explored via primary research (surveys, interviews and focus groups) carried out on the experiences of staff and students at those colleges. However, wider research on issues that may restrain or aid the implementation of good practice (RQ2), and consideration of strategies to improve capability and confidence (RQ3, and how these attributes may be measured are also considered.

Wider research on what characterises ‘good’ pedagogical practice in online and blended learning environments in Further Education (RQ1a)

The systematic literature review undertaken by the Education Endowment Foundation (EEF) at an early stage of the Covid-19 emergency (Ellis-Thompson *et al.*, 2020) provides a good overview of relevant studies. The key findings of the review established that:

- Teaching quality is more important than how lessons are delivered
- Ensuring access to technology is key, particularly for disadvantaged learners
- Peer interactions can provide motivation and improve learning outcomes
- Supporting learners to work independently can improve learning outcomes
- Different approaches to remote learning suit different tasks and types of content

(*ibid.*, page 4)

While these findings are useful in establishing a reference point of what is known about the adoption of remote and online learning practices, the situation faced by educational institutions during the Covid-19 emergency is unique. None of the studies in the EEF review included scenarios where learners were studying alongside their siblings and parents working from home, or where staff and students were required to follow social distancing regulations or isolate at home rather than attend face-to-face classes, when they were available. A further important limitation of the review is that little high-quality research has been carried out in school-aged education and much of the available evidence was drawn from studies based in university and adult learning.

The literature review undertaken for this project had the same limitations as the EEF review. While research into what constitutes best practice in online TLA has been ongoing for more than 20 years, and the benefits and opportunities, the challenges and pitfalls have been explored in depth, and ideas regarding best practice having matured and been adopted, most of this research and implementation has occurred in university and adult learning settings. In addition, although there may exist some agreement that the principles underlying good pedagogy should be unaffected by the mode of delivery, it remains to be seen if the lessons learnt from this research can simply be transferred to the unique situation faced by FES lectures and students during the current Covid-19 emergency.

The implication of these limitations is that there is still a great deal of research to be done on the widespread adoption of online learning in what have until recently been traditional face-to-face TLA settings. The research for this project aims to add to understanding of this new phenomenon and provide indications of what strategies may be employed to improve online learning in the partnership colleges and in the wider education community.

Core principles of good pedagogical practice

The underlying principles for best practice in teaching are well developed, both through recognized teachers' standards (Department for Education, 2013) and established principles of good practice (Chickering and Gamson, 1989), but online practice introduces new challenges that educators need to address. With regard to online pedagogy, recipient of the Sloan-C award for Excellence in Online Teaching, Bill Pelz proposes three key principles of effective practice:

- Let the students do (most of) the work.
- Interactivity is the heart and soul of effective asynchronous learning.
- Strive for presence. (Pelz, 2010)

Community Building

Pelz's use of the term 'presence' refers to the Community of Inquiry framework (Col) which "places the learner at the center of the educational experience" (Lowenthal, 2016) and uses the concept of 'presence' to facilitate and evaluate learning experiences in online learning environments. Emerging from the experiences of educators adopting computer mediated communication, Col describes the interaction of three 'presences' (social, cognitive and teaching) through which knowledge acquisition takes place within learning communities (Garrison, Anderson and Archer, 2001).

Social presence explains the opportunities participants in online learning environments have to express themselves as "real people" (Lowenthal, 2016: 148), to show they are listening, express emotion, take part in building common goals and develop a sense of camaraderie and community in their learning journey. Boston *et al.* (2009) assert that social interaction is a key positive influence on retention, and Richardson and Swan's (2003) research exploring students' evaluation of online learning found a close association between students' appreciation of lecturers' social presence and their improved appreciation of learning. A recent study undertaken at Dublin City University (DCU) into the increased adoption of online learning during the COVID-19 emergency (Farrell *et al.*, 2020) suggests that strategies to develop social presence may include asynchronous course discussion forums where the lecturer posts a personal text, video or an audio introduction and invites the students to do the same.

Cognitive presence is described as "the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community of inquiry" (Garrison, Anderson and Archer, 2001, p. 11). Students should evidence their developing understanding and knowledge, and cognitive presence incorporates a four phase Practical Inquiry Model to identify the stages of discovery: a triggering activity, where a problem is established for further inquiry; exploration, where participants explore the issue; integration, where learners develop and hypothesise meaning from ideas put forward in the exploration phase; and resolution, where students demonstrate the new skills and knowledge learned from the previous phases into real-world tasks (Garrison, Anderson and Archer, 1999). In their study exploring what is missing in online learning, Stodel and Thompson (2006) found that students observed a lack of robustness and spontaneity normally present in face-to-face dialogue with lecturers and fellow students. While acknowledging the difficulty in encouraging critical thinking in online spaces, to alleviate this, they suggest lecturers should build flexibility into their lesson design in order to respond to changing student needs.

Teaching presence describes the pivotal role lecturers play in orchestrating a learning environment within which they provide direct instruction (by presenting content and questions, confirming understanding and responding to technical issues), as well as facilitate discussion by encouraging and reinforcing students learning. Shea and Bidjerano (2009) suggest that teaching, as well as social, presences are significant factors in improving students' knowledge acquisition.

While the differentiation of Col 'presences' is problematic (arguably all interactions in online environments are social interactions (Xin, 2012)) because of its role in research into online learning, the framework plays an important part in setting criteria for what best practice should look like. Recent studies have used the framework as an instrument to promote meaningful learning experiences (Fiock, 2020), evaluate practices in blended online courses (Abbitt and Boone, 2021) and explain the development, deployment and evaluation of "positive and community-oriented learning environments, equivalent to, if different from, face-to-face learning experiences" (Cleary, 2021; page 11).

The Community of Inquiry framework provides a useful checklist which may assist lecturers when creating and running online courses and help them consider crucial questions that will influence the design of their courses. How will students discover the knowledge required to successfully complete the course? How will they engage in meaningful learning activities and reflection? How will they be challenged to demonstrate their understanding? How will they be supported in managing their time? How will the lecturer provide timely instruction and feedback? How will they build and foster positive and cohesive learning environments?

While it is understood that encouraging and sustaining interactions and relationships significantly enhances knowledge generation in online learning environments (Palloff and Pratt, 1999), "the properties of the medium do not determine the quality of learning that takes place" Laurillard (2002: 148) – or determine if *any* learning takes place.

Online learning technologies have affordances for learning and these technologies may have positive features that improve on the traditional face-to-face experience (e.g. easier access to a wide variety of resources, more direct communication, reduced travel time) and outcomes. However, research shows that attempting to replicate face-to-face, onsite classroom techniques using online technologies is not a reliable strategy for delivering effective learning, and some 'translation' and rethinking may be required (Beetham and Sharp, 2007).

Maintaining the community of learning that had been established onsite or creating one from scratch online requires ingenuity, a good understanding of what technologies can offer and a good understanding of learners. Detailed exploration of

the many and various technologies that are available is beyond the scope of this report, but best practice for building successful communities of learning can be effectively considered by exploring ideas connected with community development (Palloff and Pratt, 1999) and learning spaces (Thornburg, 2013).

Community development

Developing an online community has similarities with small group development, described by Tuckman as evolving through the stages of forming, storming, norming and performing (Tuckman, 1965). Forming concerns first impressions when joining a group, identifying the parameters and rules of the group, testing the boundaries of the environment what behaviours are acceptable and the relationships between people.

‘Storming’ refers to situations that engender conflict with the group which encourages resistance to undertaking tasks. Conflict and resistance are overcome in the ‘norming’ stage where group cohesiveness and a sense of community develop. In the ‘performing’ phase the roles that have developed in the early phases become more flexible and participants adapt and focus on achieving common goals.

Palloff and Pratt (1999) argue that managing the storming stage is exacerbated within online environments as the lack of visual cues and misinterpretation of written messages can inhibit consensus building. To overcome this, they suggest that the lecturer should encourage students to discuss and establish guidelines and rules of behaviour which may be referred to throughout the course. Further, they recommend that in order to maintain and develop the community, lecturers should engage students with course topics, encourage student-student interaction, identify attendance and participation levels, and rigorously support struggling and non-attending students.

Digital divide

While inequalities undoubtedly exist in face-to-face TLA, research indicates that these have been exacerbated by a widening ‘digital divide’ during the Covid-19 emergency (The Sutton Trust, 2021). Restricted access to appropriate digital devices and poor home network connections tends to lead to lower levels of student engagement. This suggests that some students gain advantage (i.e. improved contact with teaching staff and other students) through access to better home facilities than others, a phenomenon closely related to the ‘Matthew effect’ (Perc, 2014).

This concept derives from the Gospel of St Matthew which states: ‘For to all those who have, more will be given’ (Matthew 25:29) and was coined more than 50 years ago to explain the processes by which distinguished scientists gain additional

rewards (Merton, 1968). In network science the effect describes patterns of behaviour whereby new nodes joining a network tend to connect with nodes that are already well-connected – essentially, those who have get more, and those that do not get less.

In terms of community building this ‘rich-get-richer, poor-get-poorer’ phenomenon may adversely affect outcomes for the most deprived students. While this effect may be mitigated by the distribution of laptops and network dongles to students in receipt of a bursary, and arranging for the most deprived students to study onsite, it is important to reflect on what lecturers can do to reduce the impact of this effect.

Research on extenuating the Matthew effect in reading acquisition (Stanovich, 1986) suggests that tackling shortfalls in achievement are best undertaken through early intervention (“identify early, remedy early” (p. 394)). Attendance and observations of synchronous engagement may be used to identify students who may be at risk of falling behind, and studies indicate that using the interaction data collected in online learning environments to build ‘early warning’ systems has a positive effect on retention (De Freitas *et al.*, 2015; Herodotou *et al.*, 2020).

Learning Spaces

Thornburg (2013) proposes “primordial learning metaphors” as useful guides for educators to consider how to construct collaborative online learning environments. These metaphors are based on ideas concerning the spaces where people have traditionally acquired or disseminated knowledge (campfire, watering hole, cave, life) - with the inclusion of more recent developments (‘holodeck’).

‘Campfire’ is closest to the face-to-face classroom experience, where a large group of students is instructed by one individual at the same time. Thornburg suggests that lecturers should provide “just enough information to set the stage for student discovery” (p 14) and to ask challenging questions which enable students to find answers on their own. In terms of online learning this type of intervention could usefully be provided in a mix of synchronous and asynchronous settings, where lecturers pre-record a topic introduction, a walk-through explanation or other form of instruction, and require students to watch and reflect prior to attending a synchronous class. Ofsted report that some FES providers record synchronous sessions for safeguarding purposes. This enables lecturers to make recordings available for students who have not attended the live class or to provide reinforcement for those who have (Joyce, 2020).

‘Watering hole’ is the space that prioritises student-student engagement. In an online setting this may involve the lecturer facilitating a synchronous class, building on prior learning (e.g. from ‘campfire’ instruction), and encouraging student discussion by setting challenging questions. Ofsted report that students “prefer ‘live’ online lessons,

where they can interact with the teacher and with one another, rather than recorded lessons” (Joyce, 2020). The watering hole concept can also be applied to asynchronous group work where students work together on a project.

‘Cave’ spaces encourage independent, self-directed learning. This may include research activities where students discover and reflect on web resources, individual case study analysis or self-grading of homework following a rubric. For many students much of the online learning experience may feel isolating and remote and it is important that the development of autonomous learning skills is supported through lecturers establishing consistency in content design, clarity in success criteria and providing clear signposting to resources.

‘Life’ is the space where students demonstrate what they have learnt in an authentic setting that is relevant to their own experience. Rather than give every student the same task to carry out, Thornburg suggests that this space provides opportunities for students to apply their learning to their own context: “The key is that the space can adapt to a wide variety of uses and can be shaped by education purposes as well as the students’ creative goals” (p. 35). In an online learning environment this may include students uploading a video they have made that demonstrates their understanding of course concepts. The life learning space concept may also include what is called a ‘mountain top’ setting where students demonstrate their learning and engage with an audience beyond their institution.

The ‘holodeck’ combines all four of the previous ideas into immersive learning experiences where students contribute to cross-disciplinary activities using a variety of technologies. This may involve project-based learning with students and others in external organisations using web-based tools to collaborate in developing shared resources.

While FES institutions have a legal role in ensuring students remain in some form of educational setting up to the age of 18, these spaces for online learning emphasise student-led learning that implies a higher degree of autonomy than provided by traditional ideas of learning and teaching at this level. Designing these online spaces requires lecturers to withdraw to some extent from the front of the class and allow students to take on a more independent role. The new role for lectures places greater emphasis on facilitation, creating environments which encourages “dialogue with students on an equal footing” (Peters, 2001, p. 90), letting “students do (most of) the work” (Pelz, 2010, p. 103), and being open about how learning results are interpreted.

Lecturers need to strike a balance between facilitating peer interaction in order to develop learning and ensuring and checking that learning is taking place. Equally, students need opportunities to demonstrate their acquired knowledge and receive

relevant feedback. Ofsted report that “Teachers do not always use online learning sessions effectively to check on and develop learning” (Joyce, 2020).

Assessment for learning

In her seminal work proposing a ‘conversational framework’ for the effective use of learning technologies Laurillard (2002) asserts that “teaching has to be interactive and communicative to overcome misconceptions; the students need individualised responses to how they express what they know” (p 159). Lecturers should ensure assessment criteria are clear to all students and are advised to use a rubric to guide student understanding of how their work is evaluated.

In addition to providing rubrics and indications of what examiners are looking for in submitted work, lecturers may also use assessment to further engage students in their learning journeys. Students should have opportunities to engage in peer review activities (Jisc, 2015) and be involved in co-creation of assignment criteria (Farrell *et al.*, 2020).

Defining best practice in online TLA draws from a deep well of knowledge and understanding of online learning that has been built up over more than 20 years. The recent rapid adoption of online learning is challenging for teaching staff and students and is testing the boundaries of what is known about good practice in this area. However, literature explored in this review suggest that good practice should include:

- Consideration of students’ individual technology and network limitations.
- Consideration of the development of community cohesion and a Community of Inquiry.
- The use of consistent design methods when designing synchronous and asynchronous learning spaces.
- Continuous and frequent assessment for learning.

Further discussion on criteria to define best practice in the context of research carried out into staff and student experiences at the partnership colleges can be found in the Development section of this report.

Research questions 1b-e, 2 and 3 explore the experience of partnership colleges and are mainly evaluated via primary research, but wider research reveals pertinent evidence regarding constraints and enablements in implementing good practice as well as strategies to improve confidence and capability

Key constraints and enablements to implementing good pedagogical practice in online and blended learning environments (RQ2)

A crucial aspect of effective teaching is how students respond to practice. Teaching online presents different challenges to face-to-face teaching, and in addition to acquiring skills in managing the various technologies involved, understanding and managing the student experience is key to succeeding in this environment. Stodel and Thompson's (2006) research into university students' perceptions of what elements of face-to-face learning they missed when studying online identifies five themes: robustness of online dialogue

- spontaneity and improvisation
- perceiving and being perceived by the other
- getting to know others, and
- learning to be an online learner
(*ibid.*, page 1)

Research conducted at the start of the Covid-19 emergency suggests that remote learning presents other challenges for students including difficulty in concentrating, 'screen fatigue', lack of motivation and decreased cognitive engagement (Patricia Aguilera-Hermida, 2020). In addition, the communication software used to deliver online learning involves a change in the way in which lecturers and students see each other. Rather than students primarily being subject to the lecturers' gaze (DePew and Lettner-Rust, 2009), the use of cameras in online environments potentially enable all participants to see each other, and may increase students' anxiety (Bernique, 2020).

Possible solutions to these issues include, engaging students in online course design (Hayhoe, 2014), understanding students' experiences of online learning, planning for opportunities that encourage spontaneous interaction, investigating technologies that enhance social presence and guiding students on how to learn online (Stodel and Thompson, 2006).

Strategies for improving staff capability and confidence in online and blended learning pedagogical practices (RQ3)

Research suggests that confidence and capability in the use of digital technology may be improved by adopting a range of strategies including:

- strategic leadership supporting digital progress,
- developing digital skills across the curriculum,
- adopting digital assessment methods, and

- developing teachers' and learners' digital skills capability (Laurillard, Derrick and Doel, 2016)

Jisc and the Education and Training Foundation (ETF) play leading roles in supporting the pedagogical use of technology (Department for Business Innovation and Skills, 2015). Their Digital Teaching Professional Framework (Education and Training Foundation, 2018) is aligned with the European Framework for the Digital Competence of Educators (DigCompEdu) (Redecker, 2017) and sets out the competences required to deliver good teaching which focus on seven contexts and activities:

- Planning your teaching
- Approaches to teaching
- Supporting learners to develop employability skills
- Subject-specific and industry-specific teaching
- Assessment
- Accessibility and inclusion

The ETF produce and disseminate a range of training modules related to different aspects of teaching practice that adopt digital tools (ETF Services Ltd., 2021). On successful completion of modules learners are awarded badges, which are considered a significant driver for improving motivation and confidence (Fajiculay *et al.*, 2017).

Jisc undertakes regular teacher and learner 'Insight Surveys' which measure attitudes and use of digital technologies in the FES sector. While not specifically focused on online and blended learning, these surveys provide useful benchmarks for this project (Jisc, 2020a; Jisc, 2020b).

DigCompEdu is a useful framework for in-depth assessment of digital competences, however for this project a simplified version (DigComp 1.0) was judged to be more appropriate. DigComp 1.0 (Carretero, Vuorikari and Punie, 2017) describes four proficiency levels which are defined by learning outcomes aligned to action verbs, following Bloom's revised taxonomy of the cognitive domain (Krathwohl, 2002). Each level characterises an improvement in competence acquisition according to the degree of cognitive challenge, complexity of the tasks undertaken and the individual's dependence in completing the tasks (*ibid.*, page 13; Table 1).

Table 1: DigComp 1.0 levels

Level	Complexity	Autonomy	Bloom's taxonomy
Foundation	Simple tasks	With guidance	Remembering
Intermediate	Routine tasks	Independent	Understanding
Advanced	Different prioritised tasks	Guiding others and adapting own practice.	Applying Evaluating
Highly specialised	Resolve complex problems	Propose new ideas and contribute to professional practice.	Creating

Source: Carretero, Vuorikari and Punie (2017, page 13)

Competence in the pedagogical use of digital technology may also be measured using the SAMR model (Martin, 2020; Crawford Thomas and Thomson, 2020). This is non-hierarchical framework that defines the stages through which technology is used to transform the student experience. The model is comprised of four categories: substitution, augmentation, modification and redefinition (Table 2) and has been adopted in several studies including assessment of teachers in initial training (Fraile, Peñalva-Vélez and Lacambra, 2018).

Table 2: SAMR Model stages

Stage	Statement
Substitution	Technology acts as a direct substitute, with no functional change.
Augmentation	Technology acts as a direct substitute, with functional change.
Modification	Technology allows for significant task redesign.
Redefinition	Technology allows for the creation of new tasks, previously inconceivable.

Source: Crawford Thomas and Thomson (2020)

The following section describes the methods used to collect data to provide insight into the attitudes to and use of online learning within the partnership.

Surveys

To achieve a baseline measure of capability, confidence and attitudes to online and blended learning web surveys were distributed to teaching staff (n=1,600) and students (n=15,000) within the partnership in early December 2020 (Appendices 3 and 4). Because of time constraints survey testing was limited to review within the teaching and learning team at Plumpton College and the CCF organisational team.

The surveys remained open to contributions for 14 days until 18 December 2020 and several reminders were emailed to each group.

Following the projects' implementation phase, follow-up surveys were distributed to teaching staff and students within the partnership and remained open to contributions for 14 days until 12 March 2021. While the student survey contained the same questions, the staff survey included additional questions aimed at measuring the impact of project development implementation on confidence, capability and overall satisfaction with online learning provision and support. No personally identifiable data were collected in any of the surveys.

Staff surveys

Staff surveys collected responses from all staff who taught online across the partnership. The initial staff survey collected 250 responses (180 teaching staff, 34 support staff, 27 management and 4 leadership). Around 20% taught most of their lessons online. The follow up survey collected 162 responses, (110 teaching staff, 19 support staff, 32 management and 6 leadership). More than 50% taught most of their lessons online.

In both surveys GCSE topics (English, English and Maths, Maths) represented the highest proportion of taught subjects, and proportions for Engineering, Creative, and Early Years and Childcare topics are also comparable. Differences in the proportion of staff teaching online between the two surveys can be accounted for by the change from partial online teaching at the end of term 1 to full time online from the start of term 2.

Student surveys

The first student survey collected 1401 responses from students across the partnership, and the follow up student survey collected 1071 responses. In both surveys around 70% of student respondents were in year 1 of their studies, more than 80% were studying at levels 2 or 3, and proportions of those studying Engineering topics (Automotive/Motor Vehicle/MMM/Engineering), Animal Management and Public Services are comparable in both surveys.

Survey questions

In addition to capturing data regarding subjects taught by staff or taken by students, staff role and student year groups, the surveys collected responses aimed at informing answers to RQ2 and 3. Respondents answered questions, rated statements and provided free text accounts of their attitudes and opinions regarding online learning technologies and working and studying in online learning environments.

RQ2 questions and statements were devised that attempted to discover the constraints and enablements experienced by staff and students with regard to use of adaptive technologies, safeguarding, technical considerations, support, general attitudes to online learning and good pedagogical practice. Where relevant, questions and statements aligned with Chickering and Gamson's seven principles for good practice in undergraduate education (1989). Questions related to emphasising time on task and communicating high expectations were covered during the interview and focus group research phase.

RQ3 deals with issues related to capacity and confidence and survey questions and statements aligned with established models of capability and confidence (e.g DigComp 1.0, SAMR model) as well as awareness of changes to use of online learning, general statements of confidence, enjoyment and use of technology and how staff access support. Although RQ3 focuses on staff practice, because students experience of online learning impacts of staff performance, students' attitudes regarding these areas were also canvassed.

Capability

Capability was measured via responses to four statements (Appendix 3, Q3 and Appendix 4, Q5). These statements were derived from the European Digital Competence Framework for Citizens (DigComp 1.0) which define four levels of general digital competence (Carretero, Vuorikari and Punie, 2017). Each level characterises an improvement in competence acquisition according to the degree of cognitive challenge, complexity of the tasks undertaken and the individual's dependence in completing the tasks.

The staff survey contained an additional capability question derived from the SAMR model (Martin, 2020; Crawford Thomas and Thomson, 2020). This non-hierarchical framework is comprised of four categories: substitution, augmentation, modification and redefinition which defines the stages via which technology is used to transform the student experience. Staff self-assessed their predominant pedagogical use of technology by responding to statements linked to these stages. To aid comprehension, examples of use were added to each statement (Appendix 3, question 8).

Comparing responses to questions 3 and 8 in the teaching staff survey contributes to answering RQ3 by facilitating measurement of the likelihood of self-assessed general digital competence translating into similar levels of pedagogical use of technology.

Confidence

To provide further insight to RQ3, teaching staff and students were asked to indicate levels of agreement or disagreement with statements aimed measuring levels of confidence and enjoyment in the use of technology (Appendix 3, question 7).

Interviews and focus groups

As well as the literature review, further investigation and analysis was undertaken based on 38 semi-structured interviews with staff (one governor, 8 leadership, 4 management, 21 teachers and 4 support staff) and 3 focus groups with 12 students within the partnership (RQ1b-e). To provide context for staff and students' understanding of this topic, further questions related to online learning implementation, capability, confidence and support were included (RQ2 and 3).

Follow up semi-structured interviews were also conducted with 4 members of teaching staff at Plumpton College who had been interviewed previously. These interviews sought to ascertain changes in practice in the two months following the previous interview as well as the impact of the implemented developments.

All interviews and focus groups were undertaken online using Microsoft Teams software.

While survey results and findings from interviews and focus groups may not be generalisable to all staff and students in all settings, they may allow inferences to be made that indicate the behaviour and attitudes of these groups of respondents and participants. The most important factor is that respondents and participants have been actively engaged in online teaching, learning and assessment during the COVID-19 emergency, and may be considered as having a high level of familiarity with and understanding of the phenomenon. In this project survey results, interviews and focus group data are compared and critically evaluated against the literature review. This involves a process of triangulation – a method whereby alternative methods are used to check and collaborate findings (Denscombe, 2010).

Findings

Qualitative research focused on interviews with 38 members of staff and focus groups with 12 students within the partnership (participants), and quantitative research was based on survey responses collected from two sets of surveys distributed to staff and students in December 2020 and March 2021 (respondents). 412 survey responses from staff who had some experience of teaching online were collected and 2472 responses from students.

The findings from this project are presented according to their relevance to the projects' research questions.

RQ1 - What characterises 'good' pedagogical practice in online and blended learning environments in Further Education?

Through a process of reading and re-reading the interview and focus group transcripts, and noting patterns in topics and issues discussed, five key themes were identified:

- Understanding students' individual remote learning conditions.
- Adapting to online TLA.
- Use of cameras.
- Building online communities of learners.
- Assessment for learning.

Understanding students' individual remote learning conditions

Student surveys undertaken for this project suggest that most students (around 70%) regularly use appropriate devices (e.g. laptops, desktop computers or tablets) and have access reliable broadband connections. Colleges in the partnership have also made great efforts to ensure that staff and students who lack these resources are supplied with laptops and network dongles. However, more than half of respondents in the first survey agreed that online classes were compromised by technical issues and interview and focus group participants acknowledge that many students still face seemingly intractable issues that impede their access to online learning.

Staff participants recognised that awareness of technology and network connectivity limitations had important implications for their teaching practice. They expressed awareness of the difficulties some students experienced accessing adequate devices and broadband connections and the barriers to learning these issues create.

Student participants told us that living with family and others who are also studying or working online causes issues regarding access to suitable space to study and external distractions. While some students were able to manage distractions and found online study at home was an improvement on studying in onsite lessons, others were less fortunate and had to undertake difficult negotiations with family and others to find suitable spaces to learn.

Many participants, both staff and students, reported issues with running communication software where online lessons were disrupted by latency issues that prevented the free flow of discussion. They suggested that the cause of this was due to slow device processing speeds, network limitations or a combination of both.

Staff acknowledged that students also need to feel comfortable using technology appropriately. Many had experienced problems with students trying to use smartphones to access course material, because screens were too small to adequately present information. However, students reported that they preferred to use smartphones because they performed better than alternative devices they had access to.

Adapting to online TLA

Staff participants reported that at the start of the Covid-19 emergency, while some functional training was provided, they needed to develop their own approaches to applying online learning technology to their practice. Some staff participants reported working with staff and students to fine-tune their teaching methods in the new environment and communicate what they had learnt to colleagues. While carefully planned approaches to the use of technology appeared to work well, some staff participants who undertook informal observations of online classes found that inappropriate use of technology occasionally inhibited teaching and learning.

Most student participants expressed a preference for face-to-face onsite classes over online learning, a sentiment supported by student survey responses. Many also expressed concern regarding a lack of training in communication software to prepare them for online lessons. Others also expressed concerns that their lecturers were not allowing sufficient time on task for some activities.

However, students also reported appreciation of elements of their online learning experience including convenience, access to resources, enhanced collaboration and ease of assignment submission.

Use of cameras

Responses to the initial surveys distributed in December 2020 suggest some dissatisfaction with online learning with just a quarter of students agreeing that the experience was as interesting as face-to-face, onsite lessons and a similar proportion agreeing that online lessons improved their learning experience. Staff responses also suggest some unhappiness with only half agreeing that students experience had improved and a similar proportion agreeing that they were confident learning was taking place. In addition, two fifths of staff survey respondents agreed that students tended to login to lessons but do not engage.

A factor that emerged from interviews and focus groups suggests that this dissatisfaction may be largely driven by concerns about the non-use of cameras during live online lessons with some staff participants saying they were not able to judge individual student attention. Some reported suspicions that students were not turning cameras on to avoid taking part in lessons.

However, some students reported genuine reasons related to device processing and connectivity issues that restrict their use of communication software. Staff also reported concerns regarding students showing their private spaces to fellow classmates, and recognised that enforcing a strict 'cameras on' policy may act as a barrier to learning for some students.

Although unhappy with not seeing the faces of many students during online lessons staff participants reported success with alternative approaches to assessing student attention and engagement. These included giving additional attention to encouraging social presence and setting non-assessed competitive activities (e.g. setting a background theme for the week and voting to decide which is the best).

In response to student disengagement due to pressure to use cameras, one staff participant spoke of a change of emphasis on the use of cameras between their first interview in December and their follow up interview in March, which involved using different approaches to checking on students' progress. Having realised that a strict 'cameras on' approach caused increased levels of anxiety, they de-emphasised use of cameras and successfully introduced alternative methods to identify student attendance and engagement. These methods involved increasing the frequency of formative assessments, including the regular use short quizzes and frequent mini assessments.

Community building

In addition to experiencing difficulties with assessing student attention, many staff respondents reported some difficulty motivating engagement. This finding was also

supported by the initial staff survey results were fewer than half of respondents agreed that they were able to motivate students in online environments. For some teaching staff this issue was compounded by their lack of familiarity with students who they had not previously met in an onsite class.

One staff participant who reported struggling with getting to know their students discovered that when they assigned students to do group work in breakout rooms based on their existing social groups, their relationship with students improved, as did levels of engagement and student progress. Most staff who used breakout rooms at some point in their lessons also found they improved student engagement, and students reported that breakout rooms tended to improve student-student as well as student-teacher interaction.

Using whiteboards, slides and other interactive technologies to inspire and encourage student discussion of lesson topics was appreciated by several student participants. An increased emphasis on using technology to encourage interactivity and student engagement has led some staff participants to adapt their practice and reduce 'teacher talk', so that students are guided towards discovery rather than given direct instruction. One staff participant indicated that they reduced the amount of information they provided in online lessons and found that student engagement improved when they set research tasks that allowed students to find the information themselves.

Facilitating effective group work depends on lecturers providing timely responses to student questions. Student survey respondents indicate that most are satisfied with the support and guidance lecturers provide and that most did not have to wait longer than 8 hours for a response to questions sent to lecturers outside of timetabled lessons. Some students also use private messaging applications to support each other, especially when clarifying assignment criteria.

Staff also reported using communication software to support differentiation strategies where students require additional provision. In one example this involved a member of teaching staff sending slides in advance of lessons and setting up a separate 'back channel' which was not visible to other students to enable the student to communicate with the lecturer and teaching assistant.

Assessment for Learning

In addition to assessing student attention and engagement some staff expressed concerns regarding difficulties in checking students' progress. Some lecturers used a range of tools, included shared documents, forms and polls to assess learning during online lessons. In a typical lesson, students may start with a collaborative activity in a

shared document, vote on key topic issues and check their learning and provide an 'exit ticket' feedback using online forms

RQ2 – What are the key constraints and enablements to implementing good pedagogical practice in online and blended learning environments in our colleges?

Staff and student surveys were undertaken in December 2020 to establish benchmark data to inform our understanding of the main constraints and enablements to implementing good pedagogical practice in online and blended learning environments within the partnership. Where possible, the results of these surveys were compared with the results of recent national teaching staff and student insight surveys (Jisc, 2020a; Jisc, 2020b).

Staff surveys sought to inform the projects' understanding of what staff who taught online believed about their abilities in using digital technology as well as key issues that affected the implementation good teaching practice. The surveys posed questions about attitudes to safeguarding, confidence in teaching online, where lecturers turned to for support and what they believed about their abilities to use these technologies to promote key good practice principles. While application of these principles was also covered during the interview research phase, the surveys also aimed to shed some light on lecturers' beliefs about their ability to motivate students and respect diverse talents and ways of learning.

To help evaluate the potential impact of staff development initiatives carried out in the first 2 months of 2021 (see Development section) a follow up staff survey which repeated questions set in the first survey was distributed in March 2021.

The initial staff survey collected 250 responses from all staff who taught online across the partnership, and the follow up collected 162 responses.

Findings from staff surveys (RQ2)

With regard to questions related to RQ2, results from the first survey suggest a high degree of uncertainty about the efficacy of online learning. While most respondents felt that technology enabled them to present information in different ways, they knew when students were engaged or not, were confident that students were learning in OLE and could help students stay safe online, there were large proportions of respondents who disagreed or expressed reservation regarding these issues. Most disagreed or were ambiguous that online learning improved students learning experience, the majority either did not believe or were uncertain that they could adjust their teaching to reach a variety of learners online and most had experienced technical issues that disrupted their classes. When requested to indicate if they

agreed that students login to online learning sessions but do not engage, about a quarter of respondents disagreed.

These results accord with reports from staff interview participants, some of whom expressed concerns regarding the non-use of cameras and difficulties in evaluating student attention.

Respondents who agreed that technical issues often disrupted their classes tended to agree that students logged in but didn't engage. They were also more inclined to express a lack of confidence that students were learning online, and disagree that they could adjust their teaching, present in different ways, motivate learners or know when students were engaged or not.

While experience of technical disruption continued to be associated with more negative appreciation of online learning, results from the follow up staff survey presents a more positive picture. In the later survey a smaller proportion of respondents agreed that their classes were disrupted by technical issues and a larger proportion agreed that students were learning online and that they were able to present information in different ways. While most respondents tended to show uncertainty or agreement with the sentiment that students logged in but didn't engage, most agreed that online learning improved the learning experience, that they could adjust teaching to reach a variety of learners, present in different ways and motivate learners. As in the initial survey, the majority of respondents also continued to believe that they could help students stay safe online and know when students were engaged or not.

Findings from student surveys (RQ2)

Similar surveys were undertaken with students within the partnership to deepen our understanding of how students were interacting with lecturers, other students and the technologies they used to access learning. While some of these topics were explored in student focus groups, the surveys were undertaken to add depth to the projects understanding of how students' experience may effect implementation of good practice.

The initial student survey collected 1401 responses, and the follow up collected 1071. In both surveys around 10% of respondents indicated they had a physical or learning disability that required accessible adaptive technologies to undertake coursework.

Results from both student surveys closely align with results from the first staff survey and also suggest a high degree of uncertainty about the efficacy of online learning. Most respondents indicated that they were able to submit work for assessment using online applications, and were happy with the support and guidance provided by

lecturers. Results also suggested an improvement in the timeliness of lecturer feedback. However, many indicated disagreement or ambiguity about their experience.

Results from both surveys show that most respondents disagreed or expressed uncertainty that online learning improved their learning experience, was as interesting as face-to-face, onsite lessons, or that they collaborated with other students online. As with results from the first staff survey, most student respondents agreed that technical issues disrupted their learning. But unlike the staff survey the proportion of respondents did not decrease in the follow up survey.

Responses to both surveys were strikingly similar with one exception – the timeliness of lecturer feedback. Of those respondents who had sent questions to lecturers outside of live classes, more than half indicated in the first survey that they received a response within 8 hours. Results from the follow up survey show that nearly 90% of respondents who had sent a question indicating they had received a response within 8 hours.

As suggested in findings derived from student focus groups, the type of devices and reliability of network connectivity used to access online learning may have a constraining or enabling effect on the implementation of good pedagogical practice in this environment. Results from both student surveys indicate that while most used laptop, desktop or tablet computers most of the time, about a third indicated that they used smartphones most frequently. A high proportion of students also indicated that their home network connection was reliable, with a small but significant number of students reporting unreliable connections.

Regular desktop users tended to indicate that their learning experience had improved and were less likely to experience unreliable network connections. Respondents who indicated that their home network connections were unreliable were more likely to agree that their online lessons were disrupted by technical issues, and less likely to agree that their learning experience had improved, that they were happy with support from lecturers, or that they worked with other students.

Students who indicated they used adaptive technologies also tended to agree that they experienced technical disruptions to learning.

Dissatisfaction with online learning is evident in responses to the overall rating of the quality of online learning. On a scale of 1 to 5 where 1 means 'excellent' and 5 means 'poor', just one third of student respondents gave a rating of 1 or 2. This is considerably lower than results reported in a recent national survey of FE students, where around two thirds of learners rating the quality of digital teaching and learning on their course as better than 'good' (Jisc, 2020a).

RQ3 – What strategies are most effective at improving staff capability and confidence in online and blended learning pedagogical practices in our colleges?

Surveys distributed to staff sought to establish how those who taught online evaluated their capacity and confidence to deliver online courses, with the aim of establishing baseline measurements and gauging the possible impact development strategies implemented across the partnership may have on these attributes. The surveys asked respondents to self-assess their digital ability and posed questions to elucidate awareness of changes to college's approach to online learning, the importance of technology, as well as attitudes to and confidence in using online learning technologies. The surveys also sought to collect data on how staff were supported, how they used technology, as well as overall assessments of the technology they used and the support they received.

Following a short period during which a series of staff development initiatives were implemented across the partnership (see Development section) a follow up staff survey was distributed in March 2021. To assist evaluation of the impact of the development initiatives, the follow up survey included additional questions regarding observations of online lessons, Continuing Professional Development (CPD) and completion of Education and Training Foundation (ETF) modules.

Findings from staff surveys (RQ3)

Staff respondents were asked to self-assess their digital proficiency by selecting one of four statements aligned to the DigComp 1.0 framework (Carretero, Vuorikari and Punie, 2017). Around a quarter of respondents indicated they could carry out simple tasks with guidance, a third could undertake routine tasks independently, slightly fewer were able to do more complex tasks, and a smaller proportion indicated they had specialised skills and contributed to professional practice.

Staff also self-assessed their use of technology to support their practice by selecting from one of four statements derived from the SAMR model (Crawford Thomas and Thomson, 2020). This non-hierarchical framework classifies a range of increasingly sophisticated uses of technology in teaching, learning and assessment. In the first survey about a quarter of respondents indicated they frequently used technology as a direct substitute (e.g. uploaded a PDF to Teams for students to read), about a third included some functional improvement (e.g. used an online form to check student progress), nearly one fifth included technology that enabled significant task redesign (e.g. students create collaborative project websites), and less than one sixth used technology that would not have been possible until recently (e.g. collaboration with learners in other parts of the world). Follow up survey results suggest that

respondents were more likely to adopt sophisticated uses of technology in their practice than respondents to the previous survey.

Results from the initial survey indicate that more than 80% of respondents were aware of changes in approaches to online learning at their college, agreed that technology was vital in their work, and enjoyed learning new skills using technology. Slightly fewer respondents expressed confidence in their use of online learning technologies.

The follow up survey showed little change in responses to the first three of these statements, but agreement to the confidence statement showed a notable improvement on the earlier survey, which increased to three quarters of respondents. Similarly, the follow up survey shows a large increase in agreement to a statement aimed at evaluating the degree to which lecturers get support from their colleagues.

Responses to the enjoyment and confidence statements align with results reported in the recent national survey of FE teaching staff, where 70% expressed confidence in trying out new technologies, 19% gave a neutral response and 11% were either 'not very' or 'not at all' confident (Jisc, 2020b).

Most respondents indicated that they found support for using online learning technologies most often from colleagues, searching online and IT support. Results show they were less likely to seek support from curriculum managers, external or other sources. While the hierarchy of sources of support remained unchanged in the follow up survey, there were increases in the use of colleagues, search engines and IT support, with the latter showing a large increase in responses.

The follow up survey included additional questions aimed at assisting the evaluation of the impact of the development initiatives introduced in January and February (the implementation period).

Results from these questions show that the majority of respondents had been observed when teaching online during this period. Of these 102 respondents, most had received feedback on their teaching and the largest proportion of these (about two fifths) had not been advised to change their practice, suggesting they had either met or exceeded minimum standards for teaching online. This finding aligns with results of online lesson observations at Plumpton College, where a similar proportion of lecturers were found to have achieved minimum standards for online TLA.

Over half of respondents indicated they had completed Education and Training Foundation 'EdTech' modules during the implementation period. Of these, the three most popular modules were 'Delivering effective learning with technology', 'Effective

communication for learners' and 'Assessing learners' digital skills and confidence' (ETF Services Ltd., 2021).

About a third of respondents had undertaken Continuing Professional Development on topics related to digital and online skills.

Staff respondents were asked to give overall ratings for the quality of the online learning technology they used in their practice, and the quality of guidance their college provided to support their use of this technology. On a scale of 1 to 5 where 1 indicated 'excellent' and 5 indicated 'poor' just nearly two fifths of staff respondents in the first survey gave a rating of 1 or 2 for quality of technology, with a similar proportion rating the quality of guidance.

Due to an error in survey design, the follow up survey only collected responses from staff who had undertaken CPD (n=127). Of these responses more than half rated quality of technology as 1 or 2 and nearly three fifths rated quality of guidance similarly highly. This result aligns closely with the recent national survey, where just of half of teaching staff rated software, hardware, and learning environment at their institution as either 'best imaginable', 'excellent' or 'good' (Jisc, 2020b).

Respondents who agreed that they enjoyed learning new skills using technology tended to express confidence in their ability in using online learning technologies. They were also more inclined to give a higher self-assessment to their digital ability, indicate that they used technology in more sophisticated ways and give higher overall ratings to the quality of technologies and guidance at their institution.

There were no significant associations between having online teaching observed or undertaking CPD with any of other survey question. However, those respondents who indicated they had completed ETF modules also tended to express confidence in using online learning technologies, and to provide a higher assessment of their digital ability.

Findings from student surveys (RQ3)

Unlike results from the staff surveys, student surveys showed little difference between the initial iteration and follow up.

Around a third of respondents indicated they could carry out simple tasks with guidance, with similar proportions indicating they could undertake routine tasks independently or were able to do more complex tasks. A much smaller proportion indicated they had specialised skills that enabled them to contribute to their college's digital development, propose new ideas and help others.

Results from the initial survey shows that about three quarters of students had everything they needed to take part in online learning. Fewer respondents indicated awareness of changes in approaches to online learning at their college with a similar proportion expressed confidence in using online learning technologies and nearly three fifths indicated enjoyment in learning new skills using technology.

While there was little significant change in responses between surveys, it is notable that what change there was is mainly evidenced by slightly lower levels of agreement with most statements.

About two fifths of respondents indicated they had all the support they needed to use online learning technologies and most got support from other students. However, only around a third frequently found help from this source. Respondents indicated that they most often sought assistance from their class lecturer, online searches and family, with IT support being the least likely source of help.

Student respondents were asked to give an overall rating for the quality of support they received to help them learn online. On a scale of 1 to 5 where 1 indicated 'excellent' and 5 indicated 'poor' just over one third in both surveys gave a rating of 1 or 2.

Respondents who indicated they enjoyed learning new skills using technology tended to agree that they had all the support they needed, got support from other students and had everything they needed to access online learning. It is notable that the proportion of agreement with the latter statement is very similar to the proportion of student respondents indicating they had reliable network connections – and unsurprisingly, those with reliable connections were more likely to indicate they had all they needed to access online learning.

Key Performance Indicators

With regard to the three key performance indicators established for this project, only one has been achieved, with survey results indicating that staff confidence in their practice has improved. Outcomes from formal lesson observations and survey results suggest that less than half of teaching staff who have undergone development meet expected standards in delivering good or better online TLA – significantly fewer than the 75% target. Also, survey results indicate that student satisfaction has remained at the same level throughout the timeframe of this project and has not increased by the target of more than 5%.

Conclusions

The Covid-19 emergency brought about an unforeseen and exceptionally large advancement in the adoption of online learning technologies around the world. While colleges within the partnership had adopted a variety of blended learning approaches in the years preceding the emergency and had established expertise in the use of online learning technologies, the response to Covid-19 continues to present extraordinary challenges for its staff and students.

During the short timeframe of this project the manner in which learning is delivered has changed to accommodate the changing nature of the pandemic. At the start of the project some lessons were taught onsite and some online, but once the new term started in January, all teaching moved online. Lessons returned to fully onsite delivery in early March, as this report is being written, however, a few students continue to study online from home. This means that some lecturers are required to teach 'hybrid' classes – attempting to ensure that students in the physical classroom and those learning remotely have something close to an equivalent experience.

Despite some optimism that the pandemic is under greater control in the UK thanks to the perceived effectiveness of 'lockdown' measures and the distribution of Covid-19 vaccines, the future direction of pandemic mitigation is uncertain, and a return to fully online TLA remains possible.

This concluding section addresses key aspects of the project with discussion on the following issues:

- Characteristics of good practice
 - Changing teacher-student dynamic
 - Emphasising social presence
 - Guiding discovery
- Constraints and enablements of good practice
 - Technical disruption
 - Understanding students' individual remote learning conditions.
 - Enablements
 - Planning
 - Support and training

Characteristics of good practice (RQ1)

The widespread adoption of online learning technologies continues to present many technical and pedagogical challenges. The procurement and distribution of devices and network dongles to ensure all staff and students can access online learning required a great deal of administrative and technical ingenuity. In addition, the adoption of online learning had a fundamental effect on teaching practice and the relationship between lecturer and student.

Changing teacher-student dynamic

While the Education Endowment Foundation (EEF) literature review is correct to emphasise that “teaching quality is more important than how lessons are delivered” (Ellis-Thompson et al., 2020, page 4), with regard to online delivery, both aspects (teaching quality and delivery) are intrinsically linked. Lecturers have continued to focus on maintaining the quality of their teaching as they adapt to teaching in the new environment, but the means of communication has profoundly affected their practice, especially with regard to their interaction with students.

One of the well-established principles of good pedagogical practice is the encouragement of contact between students and faculty (Chickering and Gamson, 1989), which places and teacher-student interaction at the heart of teaching quality. In addition to delivering well-structured lessons, teacher-student interaction typically involves a pastoral relationship that includes understanding the needs of students and “an awareness of [their] physical, social and intellectual development” (Department for Education, 2011, page 11). During lessons this interaction may take the form of a quiet word between the student and lecturer, one-to-one tutorials, phone calls home or conversations during parent evenings. Or it may take place within a range of chance encounters, for example, immediately before or after a lesson, or outside of the classroom. The technical challenge involved in moving onsite lessons to online environments has had the unintended effect of impeding many of these opportunities to get to know students better and has tended to shift the main focus for many lecturers toward purely delivering lessons.

Attempts to replicate onsite classes using communication software (e.g. MS Teams, Google Meets) has resulted in a fundamental change in the classroom dynamic. In an onsite, physical classroom, lecturers normally hold a privileged view of their students (DePew and Lettner-Rust, 2009). This enables them to see all their students, identify visual cues that broadly demonstrate levels comprehension and allows them to adjust their teaching based on these cues. Students have a more restricted view, typically limited to being able to see the lecturer and those nearest to them. This is a well understood environment which have established rules regarding privacy and trust.

On the other hand, communication software facilitates a more 'democratic' view of a class and creates a radically different dynamic where all participants are similarly privileged and where all participants can potentially see the faces and backgrounds of everyone else (as well as themselves). This has important implications for participants' privacy and their trust in the behaviour of others. Without established and agreed rules, all who enter this environment are required to find their own way around it, and project findings show that while finding their own paths, most students in the partnership chose not to share their images during most online lessons.

Many lecturers report being surprised and mystified by their students' unwillingness, and often refusal, to turn their cameras on. Some continued to encourage the use of cameras at all times, but with little success, and often with reduced levels of student engagement. However, some lecturers de-emphasised camera use and introduced other methods to assess student engagement. These included regular and frequent mini assessments, quizzes and interactive whiteboard and slide activities. They have also linked engagement in these activities with records of attendance, with the reported result of increased levels of student engagement with lesson topics as well as social interactions. Lectures and students have also reported that when working in small groups using breakout rooms students have been more likely to turn their cameras on – especially when membership of breakout rooms is assigned based on students' existing social connections. This accords with outcomes of Ofsted review of online learning in FE colleges undertaken at the beginning of the Covid-19 emergency (Joyce, 2020) which found that learners preferred lessons where they could interact with teachers and one another, as well as working in smaller groups, and Richardson and Swan's (2003) findings that students appreciate lecturers' social presence.

In terms of following established norms regarding good practice, the use of these means of assessing engagement appear to have achieved some success, as they encourage teacher-student contact with the additional advantage of developing student-student cooperation, provide active learning opportunities and respect different ways of learning.

Emphasising social presence

Of the three 'presences' enacted in online learning communities, social presence has a key role in providing opportunities for participants to express themselves as 'real people', build common goals and a sense of community (Lowenthal, 2016). Because online learning lacks the many of the opportunities for the chance interactions facilitated by onsite learning, most interactions in online environments have to be planned. To facilitate this, several lecturers stated that they scheduled regular one-

to-one meetings with their students, called home when necessary, allowed time in online lessons for social chat and timetabled short online sessions for fun, non-course related activities. This aligns with Stodel and Thompson's (2006) suggestions to improve social presence which include understanding students' experiences of online learning and creating opportunities that encourage spontaneous interaction.

Further, Farrell *et al.* (2020) suggest that strategies to develop social presence may also include asynchronous course discussion forums where the lecturer models behaviour intended to encourage students to present themselves as real people. This can set the tone at the start of a course by the lecturer sharing biographic details and enthusiasm for the course topic via text-based messages, a video or an audio introduction - and inviting students to do the same.

Guiding discovery

Lecturers reported success putting more emphasis on their role as a guide rather than an instructor during online lessons. While there will always be a need for direct instruction in online settings this may be better approached through the lecturer producing and sharing simple 'how-to' videos with their students asynchronously. Reducing 'teacher talk' and setting collaborative work for students, sets the stage for student discovery. By providing timely responses to questions and setting brief formative assessments, lecturers may guide and evaluate student progress as they undertake these tasks.

Although some lecturers have found lesson planning for online especially time consuming, project findings suggest that online learning has generally been a positive experience for many members of teaching staff as well as students. While there remains some hesitancy - and remote learning has not worked well for everyone on all courses - having experienced what fully online learning can do, many lecturers and students expressed satisfaction with this approach. Those lecturers who indicated that they enjoyed learning new skills using technology also expressed greater confidence in teaching online, and those that adopted social approaches to learning and tended to guide rather instruct, reported higher levels engagement from students. Students also reported and indicated that they appreciated these methods.

Constraints and enablements to implementing good practice (RQ2)

Technical disruption

Not all staff and students have had positive experiences, and project findings suggest that uncertainty and dissatisfaction with online learning are chiefly associated with technical disruption of lessons and unreliable network connections. In depth analysis of the causes of technical disruption is beyond the scope of this project, but the high proportion of survey respondents experiencing sufficient disturbance to interrupt lessons is a cause for concern, and a significant constraint to implementing good practice. While those students indicating they had unreliable network connections is small (around 15%), the impact on their learning as well as the successful running of online lessons can be considerable.

Findings from the EEF systematic literature review suggest that “ensuring access to technology is key, particularly for disadvantaged learners” (Ellis-Thompson et al., 2020, page 4), and staff participants acknowledged that a ‘digital divide’ existed in their colleges which prevented their most deprived students from fully engaging in online learning.

Despite the distribution of suitable devices and network dongles to students identified as disadvantaged, survey results show little change in students’ use of smartphones to access online learning. Similarly, the proportion of students with unreliable network connections remained the same. Taken together with continuing issues with technical disruption, this suggests that further steps should be considered to mitigate these issues.

Understanding students’ individual remote learning conditions.

One approach may be to investigate and adopt automated ‘early warning’ systems that use interaction data collected in online learning environments to identify students at risk of dropping out of courses. These students could then be approached to gain more detail and understanding of their individual circumstances, and provided with tailored solutions. These could include provision of more appropriate devices or alternative arrangements to support their learning. For example, at a London-based college, SEND students who could travel during the most recent ‘lockdown’ were provided with safe, Covid-secure onsite learning. If they were unable to travel, paper-based work derived from timetabled online lessons was sent to students, followed by regular contact with their lecturers (Department for Education, 2021a, page 15).

A simpler approach would be to make more learning materials available asynchronously, for example, via discussion forums or recorded content. Where lecturers are able to make recordings of their live online lessons available, students who have not been able to attend the live class may access the content later (Joyce, 2020). Lecturers may also make slide presentations and other supporting material available prior to lessons.

Survey findings suggested a tendency for students using adaptive technologies to also experience technical issues that disrupted their learning, but it is uncertain how to account for this. Results show no association between use of adaptive technologies and unreliable network connections or inappropriate devices, and both types of communication software used in the partnership employ a range of features aimed at improving accessibility, including live captioning, screen readers and keyboard shortcuts (Microsoft Corp., 2021; Google LLC, 2021). One solution may be to ensure that users of assistive technology are consulted and included when developing new online courses (Hayhoe, 2014).

Students also referred to issues regarding their home learning environment as well as difficulties gaining competence in using online learning technologies. While survey results and follow up interviews suggest that staff confidence, capability and satisfaction improved during the implementation phase, results from student surveys indicate that they generally remained dissatisfied. This finding is echoed by other research which identified general negative attitudes to online learning among students (Patricia Aguilera-Hermida, 2020). Measures to mitigate these potential constraints may include providing students with the means to manage their own learning, through the dissemination of good practice guides to studying online (see Development section) and enhanced training in the use of communication software prior to attending their courses.

Enablements

Enablements of good practice to implement online learning (RQ2) is closely aligned with considerations of effective strategies to improve confidence and capability (RQ3) and will be considered in tandem for the remainder of this section.

Planning

Findings indicate that lecturers who adopted well-structured planning methods, reflected on their practice and shared their knowledge with colleagues, experienced better levels of engagement with students. One lecturer recounted their experience of adopting a form of 'agile' project management to the development of their online lessons. They enlisted the help of colleagues and selected students to assist with testing their online classes. Through an iterative process of design, test, feedback,

redesign, they ensured that their methods worked technically and pedagogically prior to running real, live lessons. They then communicated their approach to their colleagues.

Good planning should involve working with all stakeholders to create an engaging learning environment that works for everyone. As referred to above, understanding the home learning environment of students plays a crucial part in this. Working out in advance how to manage situations where some may be experiencing unreliable networks, sub-optimal devices, or other distractions can improve overall satisfaction. This may include establishing alternative methods of teacher-student and student-student communication, providing asynchronous content that students can work on when they reconnect and additional guidance on good practice when studying online.

Support and training

Formal support for teaching and learning within the partnership is provided by learning support professionals via a range of activities, including regular CPD sessions, encouragement to complete external training modules, teaching observations and one-to-one support. However, while most survey respondents indicated they recently engaged in some or all these development opportunities, survey results indicate that many lecturers tend to seek support from their colleagues. Further, those who indicated seeking support from colleagues were also inclined to express confidence in their use of online learning technologies. While informal work-related networks are supported with varying degrees of success within the partnership, social network research suggests they can be highly effective in supporting professional development (De Laat, 2012) and enhancement of these networks within the partnership could provide a useful additional layer of assistance and encouragement to struggling lecturers.

Completion of EdTech modules also seems to be an indicator of confidence in the use of online learning technology as well as a higher self-assessment of digital competence. This may be associated with the awarding of digital badges which research suggests may positively influence learner motivation and confidence (Fajiculay *et al.*, 2017). However, without further investigation it is uncertain if the opposite is closer to the truth, as those who indicated they are more confident and competent may be more likely to complete these modules than those who are not. Notwithstanding this uncertainty, results from follow up interviews with lecturers suggest that undertaking CPD improves confidence and competence when combined with greater opportunities to practice online TLA.

Staff survey results suggest that self-assessed digital competence improved during the implementation period. Higher levels of competence were also associated with more complex use of learning technology. It should be noted that the SAMR model adopted for self-assessment of this use is not hierarchical, and that lower levels of complexity using a purely 'substitution' approach to technology implementation may be no less pedagogically effective than more sophisticated 'redefinition' methods (Crawford Thomas and Thomson, 2020). Nevertheless, undertaking assessments on technology use is a valuable exercise as it provides an indication of the level of support required as staff competence progresses.

Recommendations

Project findings suggest the following recommendations can be made:

Improve student support:

- Actively promote good practice guidance to support online studying.
- Provide training opportunities for students to practice using online communication software prior to starting courses.
- Establish the baseline minimum for student hardware and software and audit to ensure compliance with the minimum.
- Provide suitably equipped spaces for 'at risk' students to study onsite using college facilities.

Improve staff development:

- Promote digital skills development across the curriculum.
- Actively promote staff networks that encourage knowledge sharing.
- Carry out regular assessments of staff online learning technology use to inform CPD programmes.

Improve online teaching practice:

- Engage all stakeholders in online lesson design and testing. Ensure consultation includes regular users of assistive technology.
- Emphasise social presence. Model and encourage appropriate sharing behaviour.
- De-emphasise camera use. Assess student engagement via regular and frequent mini assessments, interactive activities, and small group breakout room tasks.
- Ensure staff do not introduce activities which require more than the baseline unless it is for stretch and challenge for specific learners that have the hardware and the software to be able to comply.
- Record online lessons whenever possible and make available for students to catch up or reinforce their learning.

Further study recommendations

- Investigate 'early warning' systems based on interaction data to identify 'at risk' students.

- Investigate the use of digital badges to motivate staff completion of CPD and other training.
- Review and investigate alternatives to current staff networks that encourage knowledge sharing.

Development

Five key development activities were undertaken by the partnership to produce support materials for platform use and content development:

- a) Criteria to define best practice and minimum expectations for good or better online teaching, learning and assessment.
- b) Structured staff development programme.
- c) Study guides for students.
- d) Methodology/criteria for effective assessment of online learning.
- e) Progress Measuring Tool for Self-Assessment

a) Criteria to define best practice and minimum expectations for good or better online teaching, learning and assessment

The literature review established that key characteristics of best practice for good or better online teaching, learning and assessment are:

- Consideration of students' individual technology and network limitations
- Consideration of the development of community cohesion and a Community of Inquiry.
- Consideration of the development of community cohesion through stages of:
- The use of consistent design methods when designing synchronous and asynchronous learning spaces.
- Continuous and frequent assessment for learning using a variety of synchronous and asynchronous approaches.

Research undertaken for this project suggests that many members of teaching staff throughout the partnership implement best practice in the online teaching and incorporate some or all of these characteristics in their pedagogy. This section will focus on good practice identified in the research and reflect on implications for continuing professional development.

Consideration of students' individual technology and network limitations

While students are required to attend live online classes our research indicates that many experience technical disruptions that interrupt learning. Staff also report technical issues mainly related to unreliable network connections which interrupt lessons. While attendance should continue to be mandatory, some flexibility in delivery should be considered to take account of these issues.

Many hundreds of laptops and dongles have been distributed to disadvantaged students, but many still continue to experience problems learning from home which interrupt their learning. Improved guidance on good practice for remote learning may alleviate some of these issues, but other steps may be considered.

Staff taking part in this project have reported recording their lessons, and providing other content which students can access asynchronously once their network access returns. Some students have been allowed to use onsite facilities to access online lessons. Others have had course content and assignments delivered by post, followed by phone calls from their lecturer to assess progress.

Consideration of the development of community cohesion and a Community of Inquiry

The literature review explored aspects of community building that are vital to successful online learning. These indicate that at the start of a new course staff should reflect on how they induct students into their classes, how they communicate their passion for their subject, how they model and establish rules of conduct, and what they can do to encourage students to establish their social presence in the online classroom. This may include the lecturer:

- sharing their background and interests via text-based messages, a short video or audio introduction and encouraging students to do the same,
- discussing and setting rules for behaviour,
- scheduling opportunities for social chat and non-study related fun activities.

Lecturers should also reflect on how groups develop through stages of forming, storming, norming and performing, and be prepared to manage each stage. Especially being aware of the misunderstandings that can arise from reliance on text-based messages, where visual cues are missing during the storming stage, as well as readiness to provide timely guidance and support during norming and performing stages.

Methods to stimulate cognitive presence should also be considered, for example, providing opportunities for peer instruction and small group discussion within breakout rooms. In addition, lecturers should reflect on how they manage teaching presence through designing and planning lessons. This should balance direct instruction with guidance towards discovery, and ensure content is delivered in well-paced chunks that allow regular scheduled screen breaks.

The use of consistent design methods when designing synchronous and asynchronous learning spaces

A significant component of teaching presence is design of the online learning environment. While continuing to promote mandatory attendance in online lessons, lecturers should also consider how they manage the various synchronous and asynchronous methods of delivery and engagement. In this project we have focused on Thornburg's learning metaphors (campfire, watering hole, cave, mountain top and holodeck) which illustrate how lecturers may consider the mix of live, synchronous lessons and on-demand, asynchronous interaction.

Campfire

As well as giving access to content to students who experience technical disruption during online lessons, providing recordings of these lessons can also help reinforce learning for those who attended. Pre-recording of a topic introduction or instruction can be made available asynchronously and followed up with reinforcement during synchronous lessons.

Watering hole

During research for this project there were many examples lecturers having success with planned collaborative tasks employing small group discussion in breakout rooms or forums focused on specific topics.

Cave

Online learning provides many opportunities for asynchronous self-directed study of course content. This may include providing reading lists and links to external resources that encourage and strengthen knowledge acquisition.

Mountain top and Holodeck

Although not observed during this project, online learning technologies may facilitate assignments that allow digital as well as text-based submissions. These may include student produced slide, audio or video presentations that demonstrate understanding of a topic or mastery of a process (mountain top). Studying online may also provide networking as well as learning opportunities by enabling project-working with students at other institutions (holodeck).

Research for this project indicates that those lectures who tested their lesson design and technology with colleagues and selected students prior to running live lessons felt better prepared to manage unforeseen issues and were generally satisfied with student engagement and outcomes.

Continuous and frequent assessment for learning

One of the key findings from this project suggests that regular and frequent assessment for learning not only provides clear indications of student progress, but may also act a proxy for missing visual cues due to student reluctance to turn their cameras on. Lecturers who adopted frequent mini assessments, quizzes and interactive whiteboard and slide activities in their lessons, and linked engagement in these activities with records of attendance found that student engagement improved.

As reported by lecturers taking part in this project, many online lessons included some or all of the following elements:

- lessons typically began with welcome, chat, and what one lecturer referred to as “a little bit of housekeeping or parish notices”,
- a starter or entry ticket which students accessed through a shared document,
- a brief introduction to the topic using whiteboard or interactive slide
- small group discussion and/or project work in breakout rooms using shared documents,
- a short plenary session,
- a scheduled break allowing students and lecturers to step away from their screens.

Some lecturers also used polling or short questionnaires throughout the lesson to check progress, as well as answering questions posted in the chat feature and regularly checking progress in breakout rooms. At the end of the lesson an exit ticket was often used to evaluate understanding and progress.

Implications for CPD

Adopting good practice in online TLA requires a different skill set to onsite classroom and includes support and training in

- Basic problem solving
- Online study skills
- Online course and lesson planning
- Use of online learning technologies
- Digital production skills

How staff and students are encouraged and supported in developing these skills is discussed in more detail in the following sections.

b) Structured staff development programme

EKC Group (EKCG) has provided online learning for GCSE Maths and English since March 2020, with the addition of vocational delivery from January 2021. Microsoft 365 was adopted throughout the group which facilitated online lessons via Teams, the use of Class Notebook to demonstrate student progress, as well as the adoption of several plug-ins aimed at enhancing the learning experience. To support the use of these technologies EKCG established a structured digital development programme (DDP) that integrated the Educational and Training Foundation's (ETF) Digital Teaching Professional Framework (Education and Training Foundation, 2018) within their overall CPD programme. The ETF produce and disseminate a range of 'EdTech' training materials supporting digital pedagogy and award badges on successful completion of modules (ETF Services Ltd., 2021).

Rationale and initial working party suggestions

Prior to the Covid-19 emergency a "Digital Champion" group (The EKC Digital Learning Group) was initiated in part fulfilment of strategic aims to boost digital innovation in teaching practice. Made up of employees identified as leaders of digital innovation, the group advised on a range of digital innovation issues. Initial feedback on the DDP found that EdTech modules:

- Are short and could be easily completed within a busy schedule.
- Are accessible and provide a good starting point for staff new to digital pedagogy.
- Are graded in terms of complexity and therefore more capable staff should be allowed to choose which modules they take.
- Should be linked to use of Microsoft 365 tools and signposted to relevant packages and Instructor Led Training tools.

Using this initial feedback, the objectives of the digital development programme were:

- To adopt the Digital Teaching Professional Framework and EdTech badges. The platform and modules provide CPD linked to a recognised professional framework which encourages staff to develop and reflect on their digital pedagogy.
- For leaders and managers to receive training and guidance on how to be "leaders of digital learning" and use framework competencies to drive staff development and the digital agenda.
- To develop a line managers' Digital Development Programme User Guide that links to the EdTech platform, suggests next steps and gives advice on connecting observed practice to the DDP.

- To create DDP Community teams which would include a digital staffroom for sharing best practice, a 'safe space' for advice and other forums.
- To create a "Digital Green Door" - an open-door policy on digital classrooms so that lessons exhibiting best practice may be recorded and disseminated to staff.
- To provide an ongoing Digital Champion Workshop - a rolling CPD package developed and led by Digital Champions that is planned and disseminated in line with digital best practice.
- To initiate a reporting system that records achievement of EdTech badges. This will enable leaders and managers to identify areas for bespoke development focused on individual staff needs.

Digital Development Programme User Guide

As a means to maximise staff engagement in EdTech modules, initial training was provided to more than 60 members of leadership and management. Training included a Digital Development Programme User Guide (Appendix 5) which sets out the actions required to ensure widespread meaningful use of the EdTech platform. In addition to introducing the framework, the guide promotes the enhancement of managers' own digital skills, reinforces their key role in creating a 'positive digital culture' and embeds the framework into EKCG's staff review programme.

Results of initial training highlighted a significant variation in the competencies and adaptability of staff. Many managers suggested that a combination of time limitations and reluctance of some staff would act as a barrier to implementation. However, the guide was considered to be useful as it encouraged managers to develop their own training plans that they could tailor to accommodate individual staff members' availability and capability.

Digital Development Programme

Using this initial feedback, the DDP structure was developed in alignment with three competency levels supported by the EdTech platform (Appendix 6). EdTech levels encompass three key stages of improving competency: adopting, exploring and leading. The programme links badges achieved by completion of EdTech modules at these levels with three key elements: levels of interaction with DDP community forums, examples of good practice via Digital Green Door resources and anticipated engagement with Digital Champion workshops.

To support the rollout of the DDP, a reporting system was developed that informs leaders and managers of staff who have achieved EdTech badges. This reporting facilitates trend monitoring that may be used to inform digital pedagogy workshop planning.

DDP Evaluation

Although at an early stage of deployment, the Digital Development Programme has so far met with a positive response from users. A small-scale evaluation of DDP effectiveness was undertaken involving 30 members of staff. Of these, 27 agreed that once they have achieved a badge, DDP elements provided them with a next step in their CPD journey, and most agreed that the elements of the programme worked well together to improve digital competencies. While there was criticism of the use of badges to motivate learning and some ETF module content (which was felt did not effectively differentiate between learners), most reported satisfaction with the brevity and usefulness of the content and self-paced nature of this type of training.

Next steps

As a large organisation comprising six colleges and three business units, it is important EKC identifies effective mechanisms for sharing best practice. As a step to achieving this, a termly workshop schedule has been designed which will promote the distribution of digital skills, with the ultimate aim of creating a widespread positive digital culture throughout the organisation. The workshop schedule will offer short online sessions covering a range of key themes that have been identified through observed practice during learning walks and levels of EdTech badge completion.

c) Study guides for students

Developing students' organisational skills has been identified as an important function of student support which may improve retention and increase success in online learning (Paniagua and Simpson, 2018). Research indicates that a vital skill for students is being able to communicate effectively online and that initiatives that support their learning in this environment are worthwhile (Stodel and Thompson, 2006; Patricia Aguilera-Hermida, 2020).

Preparing students for online study focuses on improving students' academic abilities as well as their non-academic organisational and affective skills. Supporting students in acquiring these skills involves actively engaging them in their development.

Design

The study guides are aimed at providing advice on the practical, organisational skills required to prepare students for online learning. Following research undertaken at the beginning of the project, five key areas of advice were identified:

- Managing technical disruptions
- Organising home learning
- Collaborating online
- Using web resources
- Understanding online learning applications

Content which provided advice on these themes was produced and were organised under three main headings:

- Learning online
- Time management
- Online research skills

The learning online section introduces some key online learning terms, covers practical advice on developing a routine for learning online and how to make notes during synchronous lessons. The section also includes advice on managing students' home environment and discusses how to manage distractions and how to create a distraction-free learning space. This section also provides advice on expected behaviour online ('netiquette'). While producing guides that support specific applications is beyond the scope of this development, some advice on general problem solving is also provided.

The time management section provides advice on a variety of techniques that support students' organisational skills, including how to prioritise, 'timeboxing' and the Pomodoro technique.

The online research skills section guides students through the process of checking the relevance and reliability of web resources they may rely on in their academic assignments, and links to online resources provided by their college library.

Within each section there are links to external resources including videos on creating a working from home space, using the priority matrix, and a guide to testing the reliability of web resources.

Some of the content in the guides is derived from guidance for [Remote Learning](#) produced by Library Services at the University of Hull, who have licensed their content under a Creative Commons Attribution Non-Commercial Share-Alike License.

Once this content had been agreed with the organisational team, a [draft web site](#) was produced to facilitate user testing. The aim was to use the site to support a short module delivered to students at Plumpton College and to collect feedback on content appropriateness and presentation. Due to timetabling changes it was not possible to

undertake this testing, however feedback from a small group of student and staff users was obtained.

Evaluation

Responses from users indicated that the site content was useful and informative, however the language style and mode of presentation was considered potentially cognitively challenging for its target audience. Adopting different presentation methods were suggested, including shorter chunks of content and increased use of visual elements.

Next steps

Supporting students when they engage with online learning is vital to facilitating their engagement with their studies, their collaboration with other students and the overall success of online courses. Future development of guides produced for this project include:

- Investigation of alternative presentation modes
- Undertaking in-depth user testing

d) Methodology and criteria for effective assessment of online learning

Overview

Basingstoke College of Technology (BCoT) developed and deployed of a robust online assessment tool (OAT) that could support observation and evaluation of online lessons. This was adopted as part of the formal process of observations during Covid-19 'lockdown' between February and March 2021. The overall aim was to measure lecturers' capability in the pedagogical use of online learning technology in synchronous lessons.

Criteria

The underlying principles for the tool emerged from criteria for best practice and minimum expectations for good or better online teaching, learning and assessment identified in the earlier phase of the project. Following these criteria, the college quality team agreed key design principles for the assessment tool. Because the primary focus of the tool was to observe practice in synchronous settings, measuring capability in the use of asynchronous tools was not undertaken.

The OAT needed to:

- Capture characteristics of planning, delivery and assessment.
- Work effectively across college, subject areas and levels of learning.
- Capture teacher and student interactions.
- Facilitate feedback to observed staff.
- Record action plans and timelines for improvement.

Design

The OAT is based on a simple Google form (Appendix 7) which contains prompts for observers indicating what areas of teaching practice to assess and space for inclusion of overall ratings as well as detailed feedback. Prompts for observers include statements based on 12 criteria for assessment, for example: “does the teacher ensure students’ engagement is checked and maintained?”. The rating section allows the observer to note if areas of practice have been observed, if these are areas of strength or if they require development. Advisory comments may also be added.

The form includes an ‘action plan’ section where the observer may add specific details of any areas of practice requiring development, suggested actions and an expected completion date. The completed form is sent to the observed lecturer with the expectation that the action plan is completed within either a 3, 6- or 12-week timeframe, depending on the complexity of the required development.

In addition, observed lecturers were requested to self-assess their confidence in the pedagogical use of technology in online TLA using a similar web-based form (Appendix 8). Further discussion on this tool can be found in the next section.

Evaluation

By the end of March, the OAT had been used to observe 52 online lessons and was judged to have successfully met the criteria for giving feedback to observed staff, including action plans and timelines for improvement. Further evaluation was undertaken by the college quality team to assess its usefulness in recording observed behaviour.

Did the OAT capture characteristics of planning, delivery and assessment?

Observers noted that when planning sessions, staff did not always link technology to lesson outcomes, but rather to assessment briefs, however this did not adversely affect students’ learning.

Examples of good practice in clearly communicating objectives were observed. These typically involved the use of slide presentations which lecturers used to

engage students in a series of scaffolded activities that included regular assessment of learning which adopted effective questioning techniques. Interactive whiteboards were also used to guide students, and facilitate whole class discussions or small group collaborative tasks.

Fewer than 13% of observed lessons were identified as adopting particularly weak pedagogy, where content was delivered mainly through didactic, lecture style, delivery that involved little or no student participation.

Did the OAT work effectively across college, subject areas and levels of learning?

There are more than 20 subject areas taught at BCoT and more than half have had lessons observed using the OAT - including Accounting, Art and Design, Beauty, Catering, Engineering, English, Hairdressing, Maths, Media, Public Services. More than half of observed lessons were delivered to level 3 students.

The tool was judged to be effective in facilitating recording of practice in all areas of online learning with the exception of levels of learning, where potential observer reliability issues were identified. This issue was particularly noted in level 3 lessons with regard to observing tasks that encouraged critical thinking. Most level 3 lessons include practice that enables students to develop critical thinking skills, however this practice was not observed in a high proportion of these lessons.

Did the OAT capture teacher and student interactions?

BCoT adopted Google Meets to deliver online lessons, and lecturers were observed to use a range of in-built tools to give timely feedback and assess learning effectively. These tools included the text-based chat feature, polls, quizzes and interactive whiteboards. In some subjects flexible USB cameras were used by lecturers to show and model techniques, and by students to demonstrate mastery.

In Engineering and in Media lessons good practice was observed in the use of other web-based applications. Engineering students used a computer-aided design tool that was particularly effective in encouraging collaborative work. Media students were set independent study tasks using cloud-based video and social media production applications.

Overall, lecturers were observed to communicate effectively. However, it was noted that students had some difficulty following questions and instructions that were presented only through verbal communication. This led to adjustments of the OAT observation criteria to include consideration of different ways of presenting information.

Next steps

It is too early to measure the impact of the OAT on overall quality of online learning or student learning. However, the tool has proved to be useful as a means to identify areas for improvement in specific subject areas, as well as across the curriculum. This information will be used to plan continuing professional development sessions especially in promoting the sharing of good practice and building communities of learning.

Specifically, the college quality team aim to investigate:

- Adopting OAT criteria aimed at capturing lecturers' practice in supporting students' online communication skills.
- Potential observer reliability issues.
- Using more professional discussion as part of a dialogue to consider aspects of pedagogy that could be enhanced by technology.

e. Progress measuring tool for self-assessment

Alongside the online assessment tool (OAT), the BCoT college quality team developed and carried out a test deployment of a self-assessment tool (SAT) to facilitate lectures' reflection of their capability in the pedagogical use of online learning technology in synchronous settings.

Criteria

The underlying principles for the tool emerged from criteria for best practice and minimum expectations for good or better online teaching, learning and assessment identified in the earlier phase of the project. Following these criteria, key design principles were established for the SAT that would ensure its close alignment with the OAT. Because the primary focus of the tool was to observe practice in synchronous settings, measuring capability in the use of asynchronous tools was not undertaken. The SAT needed to:

- Clearly explain the purpose of self-assessment
- Capture the lecturers approaches to planning, delivery and assessment.
- Facilitate authentic reflection.
- Encourage consideration of skills development.
- Work effectively across college, subject areas and levels of learning.
- Facilitate feedback to observers and line managers.

Design

The SAT is based on a simple Google form (Appendix 8) which contains questions for teachers indicating specific areas of their practice to be considered.

Supplementary explanations are provided to assist comprehension of each question.

The form invites lecturers to indicate the frequency with which they adopt each area of practice, and provides space for them to reflect on their practice.

Evaluation

Lecturers who have undergone formal observation of their online TLA were requested to complete the SAT. By the end of March, 52 lessons had been observed with 27 resulting in completed self-assessments.

Outcomes from OAT were compared with SAT results which suggest potential alignment between observers rating of areas of strength or weakness with lectures' self-assessed level of frequency in the practice of those areas. For example, 22 of the 27 indicated they selected technology to match teaching and learning 'all the time', and this area of practice was observed to be an area of strength for 21 lecturers.

While lecturers' perception of how often they engage in specific areas of practice may be considered a broad proxy for their confidence and capability in those areas, future SAT development will investigate more accurate methods for capturing self-assessment of these attributes.

Next steps

The college quality team judged that the tool had achieved good results in this preliminary phase, but that further development was required including:

- Developing methods to improve SAT completion times.
- Analysis of alignment between OAT and SAT outcomes.
- Using SAT results to identify trends in development needs.

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Appendix 1: partnership colleges

Plumpton College

Plumpton College is a specialist further education college whose main campus is on a large rural estate near Lewes, East Sussex. The college employs around 150 teaching staff and provides courses in land-based subjects and adventure education for over 3,000 students (Ofsted, 2018).

The college has a track record of successfully adopting learning technologies and practices, and its innovation has been commended (Association of Colleges, 2017). The college has worked effectively with the EKC Group (EKCG) on a Strategic College Improvement Fund project improving the effectiveness of SEN programmes. All outcomes were achieved and effective relationships endure. Plumpton has also led on four collaborative Outstanding Teaching, Learning and Assessment projects with the Education and Training Foundation.

College Principal Jeremy Kerswell is a member of the boards of Landex (the representative body for land-based colleges nationally) and the National Land Based College, and is Vice-Chair of the Skills Working Group of the South-East Local Enterprise Partnership (SELEP). SELEP is the largest LEP in the country, and the first awarded a Digital Skills Partnership; Plumpton and EKCG are members.

EKC Group (EKCG)

EKCG is a general further education college that serves the communities of east Kent from six campus at Ashford, Broadstairs, Canterbury, Dover, Folkestone and Sheppey. The college employs around 1400 teaching staff and provides courses in the majority of subject areas for approximately 11,000 students.

The college has a substantial track record of supporting college improvement in part due to Graham's role as a National Leader. They are recognised experts in SEN, maths and English and Leadership and Management. Principal Graham Razey sits on the Principal's Reference Group and has been a participant in the National Centre for Leadership, strengthening the evaluation and dissemination of this project.

Basingstoke College of Technology (BCoT)

BCoT is a general further education college with its campus in the centre of Basingstoke. The college employs around 80 teaching staff to deliver courses from entry level through to professional qualifications in the majority of subject areas for approximately 1,400 students.

are an EdTech Demonstrator College, enabling them to share and disseminate best practice across the FES sector and have been recognised for their “outstanding use of technology for improving teaching learning and assessment” (Times Educational Supplement, 2018). BCoT has also been awarded three Edufuturist awards in 2019, “College of the Year”, “Educational impact Award” and “Student Digital Champion” (FE News, 2019). This is further supported by Principal Anthony Bravo’s role at the Chair of the Association of Colleges Special Interest Group – Technology.

Appendix 2: glossary

Asynchronous

Asynchronous learning refers to learning that does not occur in the same place or at the same time for all students. Resources may be made available and interaction take place in Virtual Learning Environments, blogs, online discussion forums, online videos, social media, or other platforms.

Blended learning

Blended learning is a pedagogical approach that combines online educational materials and interaction with traditional, physical face-to-face classroom methods.

Flipped learning

Flipped learning is a pedagogical approach where students are given materials and tasks prior to a lesson and instructed to work through these independently. completing what is generally considered more traditional class work at home and extended homework tasks in school.

Hybrid teaching

Hybrid teaching is a pedagogical approach where synchronous classes are delivered online and face-to-face at the same time.

Online learning

Online learning is a blanket term describing the provision of web-based courses offered asynchronously and/or synchronously. In some circumstances online learning is also referred to as 'remote' education (Department for Education, 2021b).

Synchronous

Synchronous learning takes place with participants engaging with material in the same environment at the same time and involves the use of web-based communication platforms that enable text, video and audio interaction (QAA, 2020).

Remote education

Remote education occurs when the student and tutor, or source of information, are separated by time and/or distance and cannot meet in traditional, physical face-to-face classroom settings.

Appendix 3: staff survey

College Collaboration Project Plumpton College Staff Survey

This questionnaire gives you the opportunity to express your views about online and blended learning. Your responses will be treated in confidence.

What you tell us will contribute to the College Collaboration Fund research project being undertaken by Plumpton College, Basingstoke Technology College and East Kent College Group ('the consortium') to help us evaluate the effectiveness of online learning at your college and improve it in future.

Your answers will be treated in the strictest confidence and all data disclosed will comply with the General Data Protection Regulations. What this means in practice is that all data will be stored securely, your answers will not be shared with anyone outside of the consortium, and will only be processed and analysed by the investigator and/or their supervisor. Any subsequent transcription, analysis or discussion regarding this questionnaire will refer to your answers by a code number - not your real name.

Consent

1. Please select a statement below to indicate your consent to taking part in this survey

- ☐ I consent to take part in this survey.
- ☐ I do not consent to take part in this survey.

2. What is your primary subject area? *

- ☐ Animal Management
- ☐ Agri-Food and Environment
- ☐ Equine and Adventure Education Sport
- ☐ Horticulture, Forestry and Floristry
- ☐ Machinery, Metalsmithing and Motor Vehicle
- ☐ Veterinary Nursing & Dog Grooming
- ☐ Wine
- ☐ Not applicable (Leadership)

☐

Other

3. Which of the following statements most closely matches your current digital skills capability? *

- ☐ I can carry out simple tasks but may need guidance with more complex activities..
- ☐ I can carry out all the tasks necessary for my job without assistance.
- ☐ I am able to adapt to complex situations and can guide others.
- ☐ I propose new ideas and processes, contribute to professional practice and guide others.

4. Do you have a physical or learning disability that requires accessible adaptive technologies for your work? *

- ☐ No
- ☐ Yes, I have one or more physical disabilities that require accessible or adaptive technologies.
- ☐ Yes, I have one or more learning disabilities that require accessible or adaptive technologies.
- ☐ Yes, I have both physical and learning disabilities that require accessible or adaptive technologies.
- ☐ Prefer not to answer.

5. What is your primary job role? *

- ☐ Leadership
- ☐ Management
- ☐ Teaching Staff
- ☐ Support Staff

6. How much of your teaching do you undertake using online learning technologies? *

- ☐ I do not have teaching commitments.
- ☐ None
- ☐ 1% to 20%
- ☐ 21% to 40%
- ☐ 41% to 60%
- ☐ 61% to 80%
- ☐ 81% to 100%

7. Please read the following statements and provide answers that best corresponds to your agreement or disagreement. *

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
My college has recently changed its approach to online learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident students are learning in online learning environments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident to help students stay safe in online learning environments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology is vital in my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy learning new skills using technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online learning technologies generally improve students' learning experience.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students log in to online learning sessions but do not engage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident in my use of online learning technologies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I get a lot of support from colleagues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical issues often disrupt my classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online learning technology enables me to adjust my teaching to reach a variety of learners.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to motivate learners in online environments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online learning environments enable me to present information in different ways.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I know when my students are engaged or not engaged during online lessons.

☐ ☐ ☐ ☐ ☐

8. Please indicate the frequency with which you use online technologies in the following ways. *

	Very often	Often	Sometimes	Rarely	Never
I use technology as a direct substitute, with no functional change (e.g. upload a PDF to Teams for students to read without any interactive elements).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use technology as a direct substitute, with functional improvement (e.g. using online forms for students to check their progress).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My use of technology allows for significant task redesign (e.g. students create collaborative websites in group projects).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My use of technology allows for the creation of new tasks, previously inconceivable (e.g. students collaborate online with students in other parts of the world).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Thinking about students in your class(es), what percentage have successfully engaged in online learning? *

- ☐ 1% to 20%
- ☐ 21% to 40%
- ☐ 41% to 60%
- ☐ 61% to 80%
- ☐ 81% to 100%
- ☐ Don't know.

10. Where do you find support for using online learning technologies? *

	Very often	Often	Sometimes	Rarely	Never
IT Support Team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Colleagues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curriculum Manager	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Google	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
External professional network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Please state what other sources of support you use. *

- ☐ None
- ☐
- Other

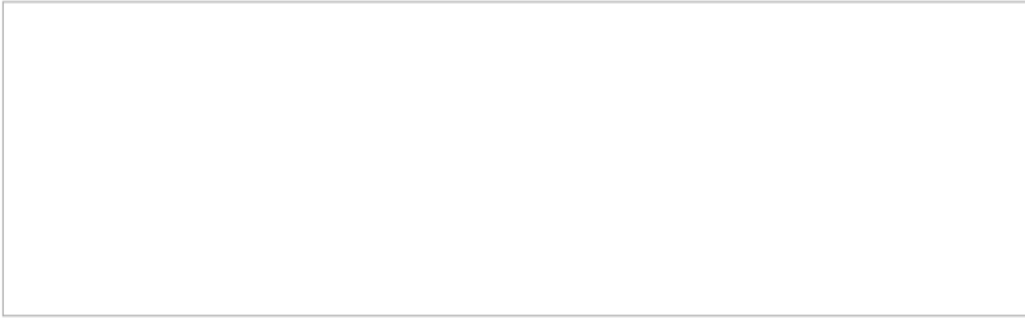
12. Overall, how would you rate the quality of the online learning technologies you use in your practice? (1 = Excellent, 5 = Poor). *

- 1 2 3 4 5
- ☐ ☐ ☐ ☐ ☐

13. Overall, how would you rate the quality of guidance your college provides to support staff using online learning technologies? (1 = Excellent, 5 = Poor). *

- 1 2 3 4 5
- ☐ ☐ ☐ ☐ ☐

14. What specific things would improve your use online learning technologies? *

A large, empty rectangular box with a thin black border, intended for the user to provide their response to the question above.

Appendix 4: student survey

College Collaboration Project - Plumpton College Student Survey 2

This survey gives you the opportunity to express your views about online and blended learning. Your responses will be treated in confidence.

What you tell us will contribute to the College Collaboration Fund research project being undertaken by Plumpton College, Basingstoke Technology College and East Kent College Group ('the consortium') to help us evaluate the effectiveness of online learning at your college and improve it in future.

Your answers will be treated in the strictest confidence and all data disclosed will comply with the General Data Protection Regulations. What this means in practice is that all data will be stored securely, your answers will not be shared with anyone outside of the consortium, and will only be processed and analysed by the investigator and/or their supervisor. Any subsequent transcription, analysis or discussion regarding this questionnaire will refer to your answers by a code number - not your real name.

Consent

1. Please select a statement below to indicate your consent to taking part in this survey *

- ☐ I consent to take part in this survey.
- ☐ I do not consent to take part in this survey.

2. What are you studying? *

- ☐ Adventure Education & Sport
- ☐ Agriculture
- ☐ Animal Management
- ☐ Blacksmithing & Metalwork
- ☐ Environmental Studies & Conservation
- ☐ Equine Management
- ☐ Fisheries & Aquatic Science
- ☐ Floristry
- ☐ Food Skills
- ☐ Forest School
- ☐ Countryside Management

- ☐ Forestry & Arboriculture
- ☐ Foundation Learning
- ☐ Game & Wildlife Management
- ☐ Horticulture
- ☐ Land Based Engineering
- ☐ Motor Vehicle
- ☐ Veterinary Nursing & Dog Grooming
- ☐ Wine Division
- ☐
- ☐ Other

3. What is your study level? *

- ☐ Level 1
- ☐ Level 2
- ☐ Level 3
- ☐ Level 4
- ☐ Above Level 4

4. What year are you in? *

- ☐ Year 1
- ☐ Year 2

5. Which of the following statements most closely matches your ability using digital technology? *

- ☐ I can carry out simple tasks but sometimes need help with new or complicated technology.
- ☐ I can carry out all the tasks I need to do without help.
- ☐ I am a confident user of a variety of digital technologies, and can help others.
- ☐ I contribute to my college's digital development, propose new ideas and help others.

6. Do you have a physical or learning disability that requires accessible adaptive technologies for your coursework? *

- ☐ No.
- ☐ Yes, I have one or more physical disabilities that require accessible or adaptive technologies.
- ☐ Yes, I have one or more learning disabilities that require accessible or adaptive technologies.
- ☐ Yes, I have both physical and learning disabilities that require accessible or adaptive technologies.
- ☐ Prefer not to answer.

7. Please read the following statements and provide answers that best corresponds to your agreement or disagreement. *

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
My college has recently changed its approach to online learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy learning new skills using technology.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online learning has improved my learning experience.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident in my use of online learning technologies.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I get support from other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical issues (e.g. slow network, software bugs) disrupt my learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have everything I need to take part in online classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am happy with the support and guidance lecturers provide.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online learning is as interesting as face-to-face classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I get all the support I need in order to access online learning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I work with other students on college projects using online applications.

☐ ☐ ☐ ☐ ☐

I am able to submit my work for assessment using online applications.

☐ ☐ ☐ ☐ ☐

8. Thinking about questions you send to your lecturers online outside of class, how long does it normally take to receive a reply from them? *

- ☐ Less than 1 hour.
- ☐ Between 1 and 4 hours.
- ☐ Between 4 and 8 hours.
- ☐ Between 8 and 12 hours.
- ☐ More than 1 day.
- ☐ I have not sent a question to any of my lecturers.
- ☐ Don't know.

9. What devices do you use to join online classes and tutorials - and how often do you use them? *

	Very often	Often	Sometimes	Rarely	Never
Desktop computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Laptop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smartphone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tablet device (e.g. iPad)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. How reliable is your home broadband Internet connection? *

- ☐ Very reliable
- ☐ Somewhat reliable
- ☐ Neither reliable nor unreliable
- ☐ Somewhat unreliable
- ☐ Very unreliable
- ☐ No Internet at home

☐

Other

11. Where do you find support for using online learning technologies? *

	Very often	Often	Sometimes	Rarely	Never
IT (or other) Support Team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your class lecturer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other lecturers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents or guardians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other family member.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Google (or other web search engine).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please state below).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Please state what other sources of support you use. *

☐ None

☐

Other

13. Overall, how would you rate the quality of online learning at your college? (1 = Excellent, 5 = Poor). *

1 2 3 4 5

☐ ☐ ☐ ☐ ☐

14. Overall, how would you rate the quality of support you get to help you learn online? (1= Excellent, 5 = Poor). *

1 2 3 4 5

☐ ☐ ☐ ☐ ☐

15. What specific things would improve your experience of learning online? *

Appendix 5: Digital Development Programme user guide



Digital Development Programme -

Line Managers User Guide

Ambitions inspired and achieved through learning and development

This guide aims to guide you through:

- The Digital Teaching Professional Framework (DTPF)
- Your role in creating a Positive Digital Culture
- Embedding DTPF and further aspects of the Digital Development Programme into 'My Progress' reviews using Essential Digital Skills (EDS)
- Using the Enhanced Digital Teaching Platform to further develop your digital delivery
- Sharing good practice and enhancing personal development with the EKC Digital Development Community teams page.
- Logging progress against the DDP on My WorkLife

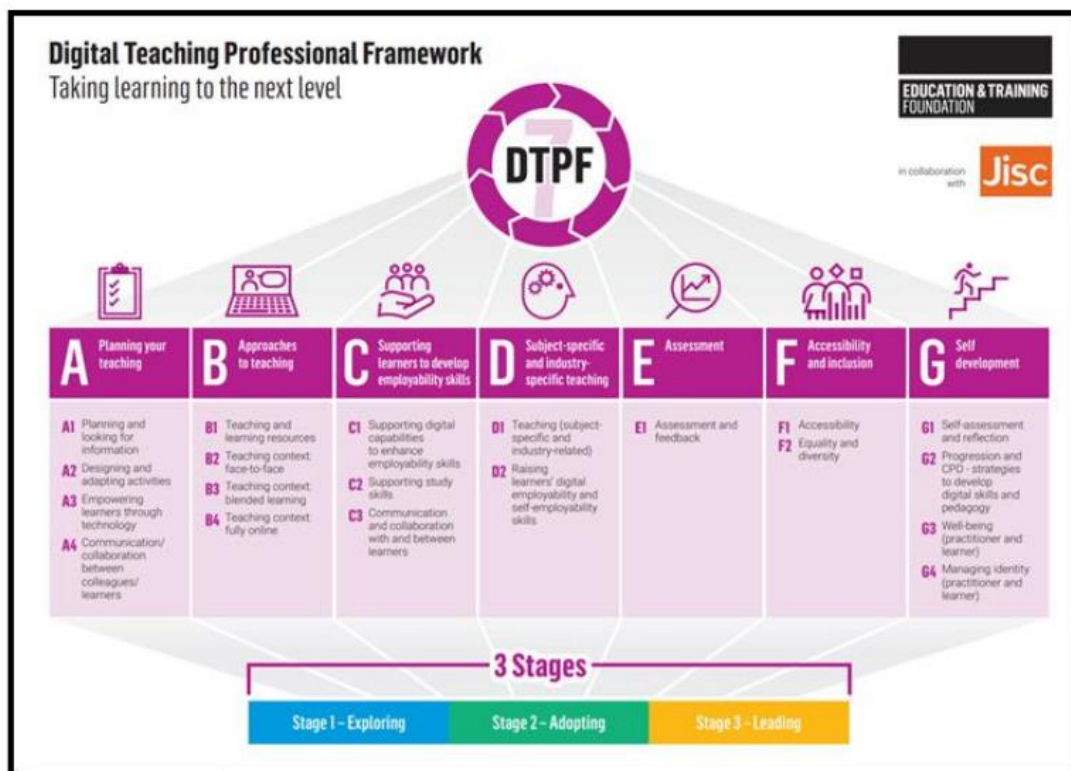
The *Digital Development Programme* is an ONGOING CPD tool for staff to ensure we are creating a positive digital culture for staff and students.

It aims to:

- Bring all relevant staff in line with the EKC minimum standards using the ETF's Digital Teaching Professional Framework (DTPF);
- Allow for ongoing developmental discussion with line manager as part of 'My Progress', reflecting on progress and engagement in the mandatory completion of DTPF modules;
- Utilise the ETF's essential digital skills modules to build on minimum standards and strive for digital excellence.

The Digital Teaching Professional Framework

The Digital Teaching Professional Framework (DTPF) is national EdTech competency framework. It was launched in November 2018 to provide a set of professional standards for technology-enhanced learning and aims to establish a common understanding of digital skills development.



Earning EdTech Badges

Once staff have completed the identified modules within the 'The Digital Teaching Professional Framework', they can begin to work through the EdTech badges. Initially, you can gain badges at three levels:

1 Star - Explore and complete a cluster of modules

2 Stars - Submit a reflection on how the module learning has supported you to change your practice and the impact this has had on you and your learners

3 Stars - Upload a resource and reflection that demonstrates how your practice has developed and the impact for both you and your learners

Staff will work towards the following badges and upload completion onto My WorkLife. All completed badges can be viewed in the staff members 'my learning' tab on the platform, as well as next EdTech badges to move onto.

Accessibility
 Collaborative Learning
 Collaborative Practice
 Connected and Effective
 Creating Content: Animation and the Moving Image
 Creating Content Fundamentals
 Creating Content: Media, Tools and Methods
 Dealing with Difference and Diversity
 Digital Assessment
 Digital Literacy
 Digital Practice
 Digital Wellbeing
 Emerging Technologies
 Engaging Learners
 Innovation and Change
 Managing Online and Blended Learning
 Mobile Learning
 Professional Learning & Development - PLD
 Study Skills
 The Digital Teacher
 Tools for digital learning
 Virtual Learning Environment - VLE
 Working with the Digital Learner

Essential Digital Skills

Following on from completing the mandatory *The Digital Teaching Professional Framework modules*, staff can complete a self-assessment to understand bespoke gaps in knowledge and digital pedagogy and support them in creating a bespoke CPD package. The interactive self-assessment tool will identify training needs, linked to training modules to respond to the differentiated spiky skills gap profiles of practitioners

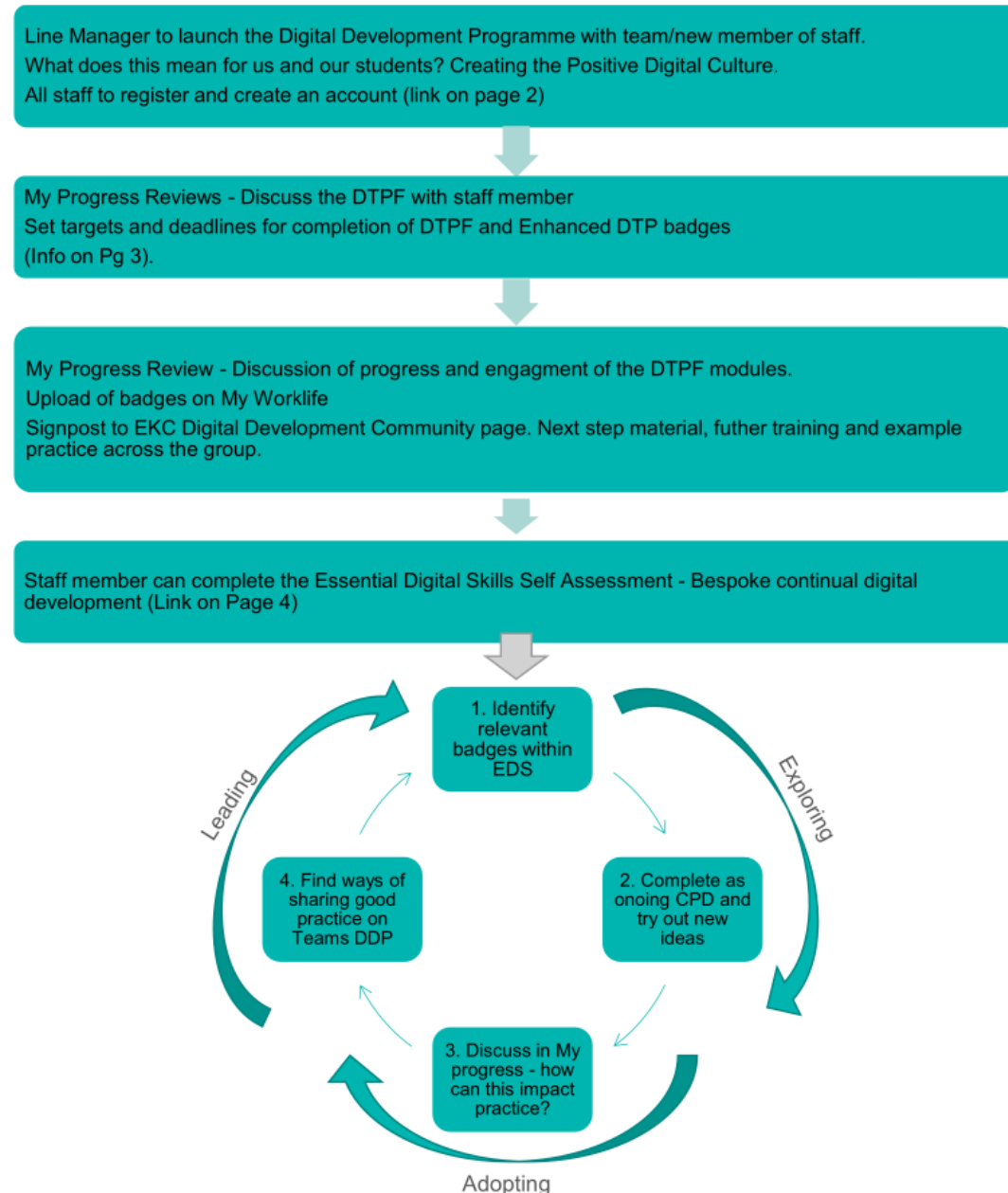
The Digital Skills programme consists of four other elements following on from the self-assessment:

- Online resources, including a series of 20 short online learning modules with teaching exemplars and advice on teaching contexts, as well as digital badges to recognise achievement
- Face-to-face training and online webinars to build confidence and share practice related to different teaching contexts
- Online communities of practice for different FE pathways to offer tailored peer-to-peer support
- Multimedia CPD toolkit to guide you through the programme



In order to lead the quality and confidence of your teams digital skills, it is important Digital is a regular discussion point in 'My Progress', with staff regularly reviewing latest modules, online training opportunities and resources through <https://enhance.etfoundation.co.uk/>.

The Digital Development Programme Process – My Progress



Leaders of Digital Learning

Example/prompts for effective discussion points within My Progress:

- Get your staff to register and log in within their 1:1, particularly if less confident. A how to video showing them how to register and manoeuvre the website is available on the EKC digital community. Discuss it with them and discuss the A-G pillars as a starting point.
- Set achievable targets and deadlines for completion/review of modules against the framework.
- Identify next EdTech badges they should move onto thinking about gaps in their practice against learning walks conducted.
- Pull up the competency statements [Click here](#). These statements will support you with forming discussion over learning walk feedback and assessing confidence against the framework.
- Reflect on progress against badges (use Power BI report). What did you learn within this module? How can you/are you experimenting with this in your practice?
- Reflect on learning walks. What digital practice did you see? Can it be shared on the Digital Development Community site?
- Completed all EdTech Badges? Encourage them jump onto the EKC Digital community site and see what other resources and tools are recommended as next steps. Maybe they can complete some of the suggested [Microsoft Educator Training](#) modules and get some more badges.

Logging completion on My WorkLife

Once a full EdTech badge has been completed, staff need to go onto *My WorkLife* and log its completion. They are also able to upload any badges

they have achieved. An email alert will go to the manager to accept the completion of this badge and prompt discussion about it in the '*my progress review*'. This also allows a manager to see all completed training for their whole team and plan additional training and activates accordingly.

The screenshot shows the 'My WorkLife' interface. On the left is a teal sidebar with navigation links: Personal, Annual Leave, Sickiness, Other Absences, Expenses/Mileage Claims, Expenses/Other Claims, Learning and Development (selected), L and D Pages Guidance, Checklist Required, Checklist Completed, Qualification - Submit, Qualification - Awaiting Authorisation, Qualification - Completed, Digital Development Programme - Submit, Training - Completed, and My Team. The main content area has a light blue header with instructions: 'Once you have completed relevant mandatory DDP modules (Phases A-G), notify your manager by logging the module completion below. Don't forget to upload your digital badges. Support on how to do this can be found in the Digital Development User guide on the Digital Development Programme Community Teams Page.' Below this is a section for 'Non mandatory Digital DDP' with instructions on logging training. The form itself has fields for Training Type (Digital Development Programme), Start Date (07-01-2021), End Date (07-01-2021), Training Course (a dropdown menu), and Training Status (a dropdown menu with options: A - Planning prior Teaching (Waiting), A - Planning prior Teaching (Waiting), A - Approaching to Teaching (Waiting), B - Approaching to Teaching (Waiting), B - Approaching to Teaching (Waiting)). There is a 'Submit' button at the bottom right.

Digital Development Programme Community Teams ([Click Here](#))

In order to have a 'one stop shop' for all things DDP, the DDP Community Teams has been created. This Teams is the ideal place to direct staff for FAQ's, latest ideas for how to use Microsoft, sharing best practice and user guides/videos. If new to using teams, click [here](#) for a video on how to access for the first time. Joining code is: o2puudg

All latest Microsoft updates, how to videos, mandatory and optional training and blogs regarding digital development will be places here. You will also be able to put our queries with things you are struggling with and have the entire EKC staff knowledge at your disposal.

Appendix 6: Digital Development Programme next step structure

DIGITAL DEVELOPMENT PROGRAMME – BECOME A 3* DIGITAL CHAMPION!

With the Ed Tech badges now in full swing and staff working at developing their digital skills, it is important we continue to build on this newfound knowledge.

Therefore, why not aim to be a 3* Digital Champion and support the EKC group share best practice and strive for digital excellence.

Ed Tech Badge Level Enhance Digital Teaching Platform	Anticipated engagement with the Teams Digital Development Community Join Team Here	Anticipated engagement with the Digital Green Door (DGD)	Anticipated engagement with Digital Champions Workshops Click here to see latest DDP workshop schedule
★ Completing relevant modules to gain a specific EdTech Badge (at explore, adopt, and leader level).	Using it to ask questions of peers, watch and explore 'how to guides' /supporting literature and grow confidence watching digital champions examples. An immediate one stop for peer on peer advice and help.	Either independently or with the encouragement/guidance of line manager, the Digital Green Door (DGD) is used to watch examples of the others pedagogy in practice.	Depending on the individual, they may feel attending workshops on developing this newfound pedagogy to be too much too soon.
★★ Submitting a reflection to ETF on how the module learning has supported you to change your practice and the impact this has had on you and your learners.	Regular discussions within the peer forums about ways you are applying your new knowledge against a badge. Sharing of EdTech Reflections with peers to open debate and discussion.	Act upon positive feedback given by line manager (against both the digital professional framework competencies and the CCF criteria) to start sharing recordings of best practice within the DGD.	Attend relevant Digital Champions workshops to further develop in areas such as (but not limited to) AfL, Digital Community of Enquiry and Learning environments.
★★★ Upload a resource and reflection to ETF that demonstrates how your practice has developed and the impact for both you and your learners.	Regularly support peers with issues and struggles using own knowledge and development. Share resources which successfully gained you your 3-star badge. Undertake additional reading and training externally to ETF and share with peers.	Regular uploads of successful lessons delivered to highlight confidence against the criteria and competencies. When discovering a new platform, app, package or tool, support with developing short videos or recordings of them in use and share within DGD.	Offering to lead short, sharp workshops and drop-in sessions as part of the ongoing Digital Development workshops schedule. Attend relevant Digital Champion workshops to further develop in areas such as (but not limited to) AfL, Digital Community of Enquiry and Learning environments.

We currently have digital champions across the Group who are giving 20 minutes of their time to share what they have learnt with the wider Group as part of the termly Digital Development Workshop schedule. All Sessions are recorded and available for watching back via the DDP Teams community, but why not book in to one of the sessions live. The Term 4 Digital Development workshop schedule can be found [within the Education Services Intranet page under Digital Development Programme](#). A new schedule will be published each term in line with key digital themes and to support us moving towards the digital ambitions outlined in the EKC strategic plan, therefore if you aspiring to be a 3* digital champion and you have some excellent practice to share, get in touch with Matthew Byrom.

Appendix 7: Assessment of online learning delivery

Criteria for online assessment: Does the teacher:	Examples / questions to consider (not exhaustive)	Rating (Not seen / Area of Strength / Development)	Comments
select technology to match teaching and learning objectives	Does the technology serve a purpose that benefits learning?		
ensure students are fully aware of what they are expected to do and how they should be doing it	Is the expected outcome explained? Is how they should be working and who with discussed / modelled?		
demonstrate the ability to use technology for content teaching	Effective online resources that are pedagogically sound		
use technology to create student centred environments for content learning	Use of breakout rooms.		
ensure students engagement is checked and maintained	Polls/ questioning/ active learning experiences		
enable students to use technology to develop collaboration skills/ communities of learning	Are the students able to connect with each other appropriately?		
enable students to develop communication skills	Are students encouraged to communicate in multiple ways?		
use technology to assess students learning both formative and summative	Does this lead to progress for the student?		
demonstrate the ability to use technology to scaffold learning	As building blocks of learning		
use technology to enable students to create and innovate	Using digital sources that students can use to create, manipulate and query their own work and the work of others		
enable students to develop critical thinking skills	Are these skills modelled / commented on?		
enable students to use technology to take responsibility for their own learning	e.g. target setting, research tasks		

Action plan

(3, 6 or 12 week action plan)

Which area requires development	Suggested actions / sources of support	Date of expected completion

Appendix 8: Self-assessment of online learning delivery

Criteria for self-assessment of online teaching: Do you:	Enhancement on questions	How often do you demonstrate these skills	Please expand on why you have given your answer
select technology to match teaching and learning objectives	Do you select technology to serve a purpose and that benefits learning?	<ul style="list-style-type: none"> • All the time • Sometimes • Often • Never 	
ensure students are fully aware of what they are expected to do and how they should be doing it	Do you explain what the expected outcome would be are you modelling this outcome to them? Do you discuss how they should be working and who with?	<ul style="list-style-type: none"> • All the time • Sometimes • Often • Never 	
demonstrate the ability to use technology for content teaching	Are you utilising effective online resources that are pedagogically sound?	<ul style="list-style-type: none"> • All the time • Sometimes • Often • Never 	
use technology to create student centred environments for content learning	Do you use breakout rooms for students to explore topics in? Have you created, or do you utilise digital resources that allow students to explore content at their own pace?	<ul style="list-style-type: none"> • All the time • Sometimes • Often • Never 	
ensure students engagement is checked and maintained	Are you using polls, questioning (both verbal and written), or active learning experiences to ensure students are engage with you lesson?	<ul style="list-style-type: none"> • All the time • Sometimes • Often • Never 	
enable students to use technology to develop collaboration skills/ communities of learning	Are the students able to connect with each other appropriately, either in your session or outside of the session through media you have created/enabled?	<ul style="list-style-type: none"> • All the time • Sometimes • Often • Never 	

enable students to develop communication skills	Are students encouraged to communicate in multiple ways?	<ul style="list-style-type: none"> • All the time • Sometimes • Often • Never 	
use technology to assess students learning both formative and summative	Does this lead to progress for the student? Can you demonstrate what they have learned or how they have progressed at an individual level?	<ul style="list-style-type: none"> • All the time • Sometimes • Often • Never 	
demonstrate the ability to use technology to scaffold learning	Is the technology you are using acting as building blocks to aid their learning?	<ul style="list-style-type: none"> • All the time • Sometimes • Often • Never 	
use technology to enable students to create and innovate	Using digital sources that students can use to create their own work, or to manipulate and query their own work and the work of others?	<ul style="list-style-type: none"> • All the time • Sometimes • Often • Never 	
enable students to develop critical thinking skills	Are these modelling theses skills for them? Are you commenting on them when they exhibit them or use them?	<ul style="list-style-type: none"> • All the time • Sometimes • Often • Never 	
enable students to use technology to take responsibility for their own learning	Are you encouraging students to set and record their own targets? Are you and they review the progress to these targets? Do they partake in research tasks to expand their own knowledge and understanding?	<ul style="list-style-type: none"> • All the time • Sometimes • Often • Never 	