

West Partnership

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Effective remote and digital learning



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1 SUMMARY

This report defines the key concepts relating to remote and digital learning. The impact of social distancing measures on education means that learning environments have and will continue to differ from the traditional classroom. In this paper we summarise existing knowledge on effective practice in such learning environments. We also consider evidence from Higher Education and China before summarising tips for practitioners and parents.

1.1 INTRODUCTION

The Covid-19 crisis has forced educators across the world to plan how to educate children and young people at a time when schools are closed to some or all learners. As countries across the world seek to ease lock-down restrictions, various challenges associated with recovery and the gradual reintroduction of learning in establishments, have emerged. During recovery, ongoing restrictions may mean that not all learners will be able to access school buildings at the same time. There might also be a need to close schools again at short notice.

As a result of this fast moving and unprecedented situation, it is very important that all stakeholders have a shared understanding of some key ideas and concepts related to the types of education that might be possible in this situation. Many of these pedagogic tools and concepts are regularly used within Higher Education and colleges but have yet to be applied within Early Years, Primary or Secondary Education. Children and young people, parents/carers and education professionals will expect our system to provide the best possible education in the circumstances. The first section of this document defines some key words and terminology which will be useful in our shared search to meet this expectation. A glossary, at the end of this document, provides concise definitions of these concepts. The second section of this document summarises existing evidence on effective practice in remote/digital learning. Finally, we present tips for practitioners and parents.

2 KEY CONCEPTS/TERMS

Remote/distance learning is learning that is directed by practitioners and undertaken by children and young people who are not physically with the teacher while instruction is taking place. Remote learning can be delivered in a variety of ways: some high-tech, some low-tech and sometimes requiring no technological solutions. In the current context, digital and online approaches will be commonly used. This might involve teacher led instruction delivered 'live' to pupils in real time and may involve interaction with peers as part of the learning experience. However, there are also approaches that encourage pupils to work independently, sometimes with technology that adapts the content of tasks in order to provide additional challenge or support (Education Endowment Foundation, 2020, p. 3). Remote learning during this period is likely to take the form of blended learning.



Blended learning relates to the combination of learning in-person and online. Used almost universally within Higher Education and colleges, blended learning in normal times involves the combination of online learning and classroom-based learning. For as long as social distancing is required, the use of classroom-based learning will be limited. Instead, blended learning during this period will involve a mixture of 'live' interactions between teacher and students and tasks for students to complete in their own time. These forms of learning are known as asynchronous and synchronous learning.

Asynchronous or Synchronous remote learning relates to the time-based nature of learning. A synchronous learning environment means that students and teachers engage in learning at the same time. Asynchronous means that student learning takes place away from direct contact with teachers. Although these terms may appear new, normal learning environments incorporate both forms. For example, the standard classroom learning environment is an example of a synchronous learning environment. Homework, completed before or after an in-person task, is an example of asynchronous learning. Our current situation requires a slight shift in the constitution of learning environments. Given the technological limitations of practitioners and students, it is not practical for schools to reproduce the normal school day via 'live' online classrooms. As such, a shift towards more asynchronous environments is necessary. Irrespective of the type of learning, virtual learning environments will aid the delivery of education.

Virtual Learning Environments (VLE) are digital platforms that facilitate learning by providing a space to house resources, deliver content and provide instruction/feedback. During social distancing, the use of VLE's such as Glow are needed to provide learners with materials and resources. Platforms such as Microsoft TEAMS or Google Classrooms may also be used as a virtual learning environment and may be handy for ensuring continued interaction between teacher and pupil. VLE's can be used for both asynchronous and synchronous learning environments. You can use VLE's to deliver live classes, set homework tasks and provide feedback. Using such environments is key to producing effective remote learning.

3 EFFECTIVE ONLINE/REMOTE LEARNING ENVIRONMENTS

This section will summarise existing knowledge on what makes an effective remote learning environment. We will first detail the general themes that have emerged from existing research before exploring recommendations for remote learning during our contemporary crisis.

3.1 WHAT MAKES A REMOTE LEARNING ENVIRONMENT EFFECTIVE?

Remote learning has been used within Higher Education and colleges for over a decade. Such learning environments therefore provide a test site for effective remote learning, albeit aimed at a different learner population. Nevertheless, existing knowledge of this area is helpful for our current predicament. In an overview of best practice in pedagogy for remote learning, authors from the Educational Development Trust (2020) identified key areas that are worthy of closer focus:

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- Pedagogic frameworks such as '**structure, adaptation and assessment**' (Department for Education, 2013) should be adhered to, despite the challenges remote learning presents. Effective teachers strive to reproduce learning environments which are well structured, provide a level of flexibility to individual learners, and use assessment appropriately. Essentially, effective in-person teaching should be aimed for on an online platform.
 - Remote learning requires '**teaching presence**' to ensure learners continue to be motivated in their studies. Research has shown remote learning to be ineffective when the relationship between teacher and learner is too distant. Indeed, Pearson (2016, p4) notes that 'research has also indicated that teaching presence is more predictive of student success in online learning than interactions with peers'. The authors suggest that teaching presence is achieved through appropriate interaction. Previous research on Massive Online Open Courses (MOOC's) demonstrates that high levels of disengagement are present when teaching presence is low, even amongst adult learners. A high level of teacher presence is therefore appropriate in primary/secondary contexts.
 - The role of teachers within remote teaching should reflect classroom-based approaches. The remote teacher is not a 'guide on the side' but should continue to be a 'subject matter expert' who explains content via **direct instruction**. Direct instruction is a teacher-led pedagogy and can consist of presenting content/questions, facilitating discussions on specific issues, summarise debates, correct misconceptions, provide explanatory feedback and use knowledge from a range of sources (Educational Development Trust, 2020).
 - Effective remote learning is aided by the creation of '**communities of inquiry**' (Garrison, 2015). Teaching presence, as detailed above, is key in creating a community of learners. This is achieved using social and cognitive presence. Social presence relates to the sense of belonging that learners have to their online learning communities. In our current situation the move to remote learning is not necessarily about creating social presence, but instead it is about maintaining the social presence that exists within in-person learning environments. Cognitive presence relates to the student's engagement with learning tasks. Effective remote learning, as within in-person learning, relies upon careful sequencing of learning tasks, moving the learner from basic to more complex understanding of content.

In summary, effective remote learning is characterised by its appropriate organisation, the presence of an educator, the direct instruction of a teacher and the creation of collaborative learning communities. Although these themes emerge from pre-COVID19 research and amongst Higher Education populations, it is likely that such themes are also relevant within younger learner populations. We will now summarise some tips given to practitioners during our current crisis.



4 TIPS FOR STAFF

In considering effective remote learning during social distancing measures, it is worthwhile considering early evidence from China. In collaboration with UNESCO, researchers (Huang et al., 2020) detailed the approach to schooling taken by the Ministry of Education in China. Their approach to remote delivery has four key components:

1) Live streaming teaching (lecture format)

- a) Uses live streaming software to present new teaching material. Requires good internet access to ensure high quality streaming. May be disengaging for students due to lack of interaction.

2) Online real-time interactive teaching

- a) Uses classroom interaction software to facilitate a more interactive teaching environment. Requires face-to-face communication, which may deter some students from engaging. Good internet connection also required.

3) Online self-regulated learning with real-time interactive Q and A

- a) Tasks are provided by teachers and online platforms are used to discuss the outcomes of such tasks. Requires pre-existing student independence and students may lack a sense of belonging to their classes. Of limited value to those who fail to complete pre-defined task.

4) Online co-operative learning guided by teachers

- a) Tasks for either individuals or groups where feedback is given directly to learner(s). May improve learners' collaborative skills and reinforce a sense of belonging to groups. Remote group work difficult within those with limited connectivity.

The Chinese approach detailed here relies heavily on digital access, which may be limited in areas of high deprivation and disadvantage. Elsewhere, the Education Endowment Foundation (2020), in a review of academic research on remote learning, place importance on the following 5 key points that can be used as tips for staff. These tips do not rely as heavily on digital access:

1. Teaching quality is more important than how lessons are delivered

Irrespective of delivery (asynchronous/synchronous), effective teaching involves clear explanation, appropriate feedback, and the linking of new material to existing pupil knowledge. Practitioners should consider how to adapt existing good practice to remote/digital learning environments.

2. Ensuring access to technology is key, particularly for disadvantaged pupils

Remote learning cannot take place without appropriate resources. Access to a computer and an internet connection are critical requirements. It is unlikely that the universal provision of these resources will exist. Therefore, practitioners should be



pragmatic in how they reach those without access. Guidance to support both practitioners and pupils use of digital technologies is also required.

3. Peer interactions can provide motivation and improve learning outcomes

Existing research, predominantly based on older learners, demonstrates that peer interaction through collaborative approaches are effective in achieving learning outcomes. It is likely that such a finding is also applicable to primary and secondary environments. Consider ways of creating or encouraging interactions amongst students. This may be within virtual learning environments or through personal channels where the teacher is not present.

4. Supporting pupils to work independently can improve learning outcomes

Remote learning inherently involves more asynchronous and independent learning. Explicit aids such as checklists, daily plans or goal setting may improve the ability of students to work independently. This will be of key importance in those who do not have access to digital resources, meaning that facilitating independent learning will take place offline.

5. Different approaches to remote learning suit different types of content and pupils

Teachers should be supported to engage with a range of learning approaches which may itself be dictated by its content/form. It is likely that some learning will be suited to digital learning, whilst others require asynchronous forms of learning to be the primary mode of learning. Consider what is best taught live or via recorded classes and what would be more suitable as an individual or group task for learners to complete in their own time.

4.1 RESOURCES FOR STAFF

The following resources are useful for practitioners:

<https://educationendowmentfoundation.org.uk/covid-19-resources/support-resources-to-share-with-parents/>

<https://educationendowmentfoundation.org.uk/covid-19-resources/support-resources-for-schools/>

<https://www.educationdevelopmenttrust.com/EducationDevelopmentTrust/files/53/537a209f-92a1-401d-a7b7-6f56b114ac00.pdf>

<https://www.gov.uk/guidance/remote-education-during-coronavirus-covid-19#remote-education-resources-for-teachers>

<https://www.gov.uk/guidance/safeguarding-and-remote-education-during-coronavirus-covid-19#virtual-lessons-and-live-streaming>

5 TIPS FOR PARENTS

Existing evidence on the importance of parental involvement, such as the Parents as Partners in their Children's learning toolkit (2006) and the National Parenting Strategy (2012), remain relevant during this period. Various organisations have provided tips for parents during social distancing. We summarise a few here:

1) Support your child's reading (Education Endowment Fund, 2020)

- a) Focus on quality rather than quantity of reading
- b) Ask your child questions about their reading and ask them to make predictions as to where the story will go next
- c) Ask your child to summarise, either in writing or verbally, their reading
- d) Try to maintain the motivation to read – this may be aided by demonstrating your own reading

2) Support your child's maths development

- a) Consider how everyday tasks can be an opportunity for your child to use their numeracy skills
- b) Consider using the wide range of online maths support resources that are available – a list can be found at: <https://education.gov.scot/parentzone/learning-at-home/supporting-numeracy/>

3) Try to maintain a daily routine (adapted from Educational Endowment Fund, 2019)

- a) Maintain sleeping habits (bed/waking times)
- b) Encourage daily exercise
- c) Plan reading periods
- d) Plan socialising time
- e) Plan time to discuss what your child has learnt each day

4) Create a positive home learning environment (Education Scotland, 2020)

- a) Provide time and space for your child's homeworking
- b) Show an interest in your child's work and encourage them

5) Be realistic and manage expectations (NSPCC, 2020)

- a) Your home is not a school and you cannot be expected to deliver a perfect curriculum
- b) Do not expect every hour of the day to be filled with learning
- c) Avoid comparisons with other families, who may exist in very different circumstances

5.1 RESOURCES FOR PARENTS

Other guidance can be found at the following links:

<https://education.gov.scot/parentzone/learning-at-home/>

<https://www.education-ni.gov.uk/articles/support-parents-and-pupils>

<https://education.gov.scot/parentzone/Documents/parents-as-partners-toolkit.pdf>

<https://www.gov.scot/publications/national-parenting-strategy-making-positive-difference-children-young-people-through/>

<https://www.gov.uk/government/publications/coronavirus-covid-19-online-education-resources/coronavirus-covid-19-list-of-online-education-resources-for-home-education>

6 GLOSSARY:

[Education Scotland \(2020\)](#) provides useful definitions of the key terms discussed in this paper:

Concept	Definition
Asynchronous learning	Children and young people undertake learning activities without direct supervision from the teacher. These activities may be digital or traditional. Learners can communicate with their teacher at their own pace or within a set time period. For example, a teacher setting a specific project and asking young people to check in through a discussion board if they have any questions
Blended learning	Includes learning that happens in real time(synchronous), alongside a teacher such as online discussions and learning which happens at the learner's pace (asynchronous) such as project work.
E-learning	E-learning or electronic learning is the umbrella term used to describe education using electronic devices and digital media. Much of our learning now involves e-learning both in and outside of the classroom environment.
Learning at home	Learning at home is a broad term used to describe the learning which happens out with early learning and childcare settings and schools. It can take place through everyday activities including play and general family life, such as food preparation and cooking. It can also happen through curriculum related activities, homework, reading and sharing books.
Remote learning	Occurs when a learner and teacher are separated by time and/or distance and therefore cannot meet in a traditional classroom setting. Information is typically transmitted via technology such as email, discussion boards, video conferencing, etc. No physical presence is required.
Synchronous learning	Online learning in which children and young people can learn from their teacher in real time. For example, a teacher teaching to a group of children or class using digital technologies.

Table 1 Adapted from: <https://education.gov.scot/media/bkunccqa/glossary.pdf>

7 USEFUL RESOURCES

7.1 OFFICIAL/GREY LITERATURE

<https://edtechhub.org/wp-content/uploads/2020/04/research-best-practice-pedagogy-remote-teaching.pdf>

<https://education.gov.scot/improvement/learning-resources/resources-to-support-the-refreshed-curriculum-for-excellence-narrative/>

<https://blogs.glowscotland.org.uk/re/renbusinesscontinuity/>

https://hundred-cdn.s3.amazonaws.com/uploads/report/file/15/hundred_spotlight_covid-19_digital.pdf

https://read.oecd-ilibrary.org/view/?ref=126_126988-t63lxosohs&title=A-framework-to-guide-an-education-response-to-the-Covid-19-Pandemic-of-2020

<https://wakelet.com/wake/60094859-26ad-4034-82a7-6bfaca607667>

<https://www.birmingham.ac.uk/Documents/HEFI/FUJ-Education-Report-UK.pdf>

https://research.acer.edu.au/digital_learning/4/

<https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/digital-technology/>

<https://educationendowmentfoundation.org.uk/covid-19-resources/best-evidence-on-supporting-students-to-learn-remotely>

<https://educationendowmentfoundation.org.uk/news/eef-publishes-new-review-of-evidence-on-remote-learning/>

7.2 ACADEMIC PAPERS

<https://link.springer.com/article/10.1007/s11213-019-09517-5>

https://www.tandfonline.com/doi/full/10.1080/1475939X.2017.1317659?casa_token=HZRWQ4LilroAAAA%3A71jaXrgBLiD5M0Q9buydwNCPLPCMxKpZBNYYyEzD24LluZnClhYpNz4_ovBNYMu6um1QYVwhUil0Q

https://research.acer.edu.au/digital_learning/6/

https://research.acer.edu.au/digital_learning/1/

https://www.researchgate.net/profile/Paul_Bennett16/publication/310952338_Digital_Learning_in_Canadian_K-12_Schools_A_Review_of_Critical_Issues_Policy_and_Practice/links/583b504408ae3a74b4a06ad6/Digital-Learning-in-Canadian-K-12-Schools-A-Review-of-Critical-Issues-Policy-and-Practice

http://irep.ntu.ac.uk/id/eprint/28274/1/PubSub5825_Boulton.pdf

7.3 COMMERCIAL

<https://www.pearson.com/uk/educators/schools/update-for-schools/distance-learning-support.html>

<https://www.pearson.com/content/dam/one-dot-com/one-dot-com/us/en/pearson-ed/downloads/Teaching-Presence.pdf>



<https://www.cambridgeinternational.org/support-and-training-for-schools/teaching-and-learning-when-school-is-closed/tools-remote-teaching-and-learning/>

<https://www.cambridgeinternational.org/support-and-training-for-schools/teaching-and-learning-when-school-is-closed/resources-for-you-and-your-learners/>

<https://www.cambridgeinternational.org/support-and-training-for-schools/teaching-and-learning-when-school-is-closed/webinars-and-online-training/>

<https://www.futurelearn.com/info/blog/resources-for-online-teaching-during-coronavirus>

7.4 BLOGS/NEWSPAPER ARTICLES

<https://educationblog.microsoft.com/en-us/2020/03/making-remote-learning-effective-and-engaging-with-microsoft-education-resources/>

<https://www.irishtimes.com/news/education/start-really-small-teachers-share-their-top-tips-for-remote-learning-1.4209759>

<https://en.unesco.org/covid19/educationresponse/solutions>