

Understanding young people's engagement in online programmes:

What does research tell us?



About UpRising

**UpRising exists
because our
decision-makers
don't reflect the
society they serve.**

We are a national youth leadership development and employability organization, recognised at Government level as a pioneering charity championing the critical issues surrounding diversity, social mobility, and equality.

We support young people (18–25) from underrepresented and underserved communities to fulfil their potential, take on leadership roles and gain meaningful employment.

We achieve this through our award-winning leadership programmes, ground-breaking employment training and a high-quality and ambitious incubated mentoring platform – One Million Mentors.

One Million Mentors exists to establish and scale reliable, high-quality mentoring, so that every young person in the country has access to a trained mentor as they transition into adulthood.

**We are recognised at
Government level as
a pioneering charity
championing the critical
issues surrounding diversity,
social mobility, and equality.**

Foreword

This research report sets out insights about young people's engagement in online programmes that I wish had been available to us as the first COVID lockdowns hit in Spring 2020.

At that time, we surveyed c. 3,500 current and past programme participants to understand how we could support them. Respondents told us that their top concerns were their employment prospects and the climate crisis. We therefore decided to continue operating throughout the pandemic and deliver our employability and environmental leadership programmes as best we could – despite no longer being able to meet in person.

This began our journey towards delivering our programmes digitally. Early on, like many others, we could see the large gap between emergency remote provision and delivery of accessible, effective, and impactful online programmes.

We've worked hard since then to reduce that gap and learn how we can make our digital delivery at least as strong as our in-person delivery. We've done so because – while acknowledging the critical importance of closing the digital divide – being able to offer high-quality programmes digitally opens up new meaningful opportunities.

That's especially true for those who might otherwise not be able to benefit from our support, for reasons of travel time and cost, work, study, or caring/other commitments.

Our first steps into this new world were initially supported by the Social Mobility Commission and then The National Lottery Fund. Both backed successive waves of a programme which paired skilled digital consultants from CAST/Catalyst with organisations keen to lean in to digital.

Subsequently, other funders enabled us to deliver our employability programme (Stand Out), Leadership and Environmental Leadership Programmes throughout the pandemic.

As a result, in the 2021-2022 financial year, we supported 672 young people.

We've learnt a great deal about digital delivery on this journey: from creating systems and processes to delivering online sessions, from recruiting digitally to measuring impact.

However, in this report we focus on one specific aspect of our experience: what does it mean to say someone is "engaged" in an online programme?

We've chosen this focus for two reasons:

1. The external evaluator (IFF) assigned to our Youth Futures Foundation-funded employability programme Stand Out identified in October 2021, that "very few programmes delivered purely online have been evaluated," and "[while] there are many studies on the engagement of online learners these tend to be very specific and not applicable to the audience and content discussed here."
2. Stand Out delivered improvements across all 9 of the externally evaluated impact measures; in 6 of those areas IFF found the improvement to be statistically significant. However, the ways in which young people participated varied hugely: some attended everything; many picked aspects of the programme that worked best for them; some did little.

Were aspects of Stand Out's face-to-face predecessor programme therefore superfluous for many? Or does digital fall short if a participant doesn't attend every live element?



Foreword

The research summarised in this report starts to answer these questions: “engagement” isn’t (only) about showing up.

While for some attendance is key, for most it’s about attitudes, mindset, and behaviours across every aspect of the programme – inside and outside of any “live” sessions.

As the report shows, this means the active management of the social and emotional aspects of a digital programme is as essential as it is in person.

This in turn creates a measurement challenge, and one that demands careful consideration in advance of any delivery.

Finally, where – and how – to strengthen engagement is summarised in the report’s four key recommendations:

1. Create a user-friendly digital learning environment
2. Support learner wellbeing and preparation
3. Cultivate community, communication, and collaboration
4. Pay careful attention to learning design and facilitation

This report isn’t designed to be comprehensive. However, it has benefitted greatly from the rigour, curiosity, and passion of its lead author: our Youth Futures Foundation-funded Data and Insight Officer Samuel Wood.

Throughout the text, our Programmes Team colleagues Emma Dillon and Meghan Causer have provided helpful examples of current practice to illustrate some of the approaches we’ve trialled.

In concluding, Rukaiya Jeraj (our Head of Programmes) draws these research findings, the advice and support we’ve received, and our practical experience over the past twenty-six months together in one place, reflecting on what this means for future delivery in the light of her extensive experience. In doing so, Rukaiya sets out some practical takeaways and the design principles which now inform our work.

If you’re curious about young people’s engagement on online programmes, if you’re faced with the challenge of measuring that engagement, or if you’re considering how to shape and devise digital programmes which support young people effectively, then we hope this report will be of use to you.

— Marc Whitmore, Chief Executive, July 2022

Contents

Executive summary

What does research say about young people's engagement in online programmes?

- 13 Introduction
- 17 Overview of online learning research
- 22 The digital learning environment
- 26 Learner wellbeing and preparation
- 30 Community, communication and collaboration
- 33 Learning design and facilitation
- 37 Conclusion

Our emerging learning and session design principles

By the numbers: a year of digital delivery

Bibliography

8

11–37

38

40

43



Executive summary

Executive Summary

Online learning has many advantages for learners including saving time on commuting to a physical location, being able to fit learning around other commitments, and opening up services that would not otherwise be accessible – for example, due to geography or other commitments.¹

At the same time, the rapid shift to online that was engendered by the COVID-19 pandemic has appropriately put questions about digital accessibility in the spotlight. **Ensuring that people have access to devices, networks and spaces to learn online are critical considerations.**

There is also a need to design inclusive and engaging online programmes. Research has indicated that the **technology itself is less important than pedagogy** for understanding the effectiveness of online programmes.²

This report addresses the question of how to increase and enhance engagement in online programmes through design and takes as its starting point that the medium through which learning is delivered is at least as important as the design of that learning.

Moreover, research has pointed out that **Emergency Remote Education (ERE) – unplanned activity in a time of crisis - is not the same thing as online learning.**³ It is important to remember this distinction when assessing the value of online learning rather than assessing its value based on rapid shifts with stretched resources.

Young people, some more than others, face barriers to online learning, so programmes need to be intentionally designed to overcome them. Online learning can mean tailored learning experiences.

However, young people's lives are far from homogenous and they face varied and varying challenges, with some groups being significantly impacted by shifts to online.⁴

Research has also shown that different outcomes are achieved in online learning based on factors, among others, relating to ethnicity, age, gender, socio-economic background, and educational background – and existing educational disparities are exacerbated in online settings.⁵

This highlights the need to support underrepresented and underserved learners and address differential outcomes in online learning. Inclusive design is critical for ensuring that online learning supports all young people.⁶

The barriers young people face include: the readiness and skills required for online learning; wellbeing and support needs; having other work, study, and wider commitments; and issues related to learner identity and feeling part of a community.⁷ Factors relating to course design, learner-facilitator interaction, and learner-peer interaction are also associated with engagement and continuation levels.⁸ This review has focused on learner related factors to ensure programmes are designed to work for young people and fit their needs.

Engagement in online and face-to-face settings is not the same. This raises important questions for the sector about how engagement is understood and measured in online programmes. Researchers typically agree that engagement is a multidimensional construct, and a recent systematic literature review has presented seven sub-categories: presence, interaction, community, participation, collaboration, involvement and communication.⁹

Any online programme for young people needs to think about engagement more broadly and look across these different areas. **Charities need an understanding of the different ways that young people engage as well as the measurement framework and technological capabilities to capture it.**

1 — Pauline Salim Muljana and Tian Luo, 'Factors Contributing to Student Retention in Online Learning and Recommended Strategies for Improvement: A Systematic Literature Review', *Journal of Information Technology Education: Research*, 18 (2019), 19-57 (pp. 20-21); Alex Tabarrok, 'Why Online Education Works', *CATO UNBOUND: A Journal of Debate* (2012), (<https://www.cato-unbound.org/2012/11/12/alex-tabarrok/why-online-education-works/>) [accessed February 2022].

2 — Anne-Mette Nortvig, Anne Kristine Petersen and Søren Hattesen Balle, 'A Literature Review of the Factors Influencing E-Learning and Blended Learning in Relation to Learning Outcome, Student Satisfaction and Engagement', *The Electronic Journal of e-Learning*, 16 (2019), 46-55 (p. 48); Barbara Means et. al., 'Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies', US Department of Education (2009), pp. ix; xvii; Sandy Baum and Michael McPherson, 'The Human Factor: The Promise & Limits of Online Education', *Daedalus*, (2019), 235-254 (pp. 48-50).

3 — Rebecca Reynolds and Samuel K.W. Chu, 'Guest Editorial: Introduction to the special issue on emergency remote teaching (ERT) under COVID-19', *Information and Learning Sciences*, 121 (2020), 233-239 (p. 233); Aras Bozkurt et. al., 'A global outlook to the interruption of education due to COVID-19 Pandemic: Navigating in a time of uncertainty and crisis', *Asian Journal of Distance Education*, 15 (2020), 1-126 (p. 2).

4 — Baum and McPherson, pp. 239-241.

5 — Baum and McPherson, pp. 239-241; Fengfeng Ke and Dean Kwak, 'Online learning across ethnicity and age: A study on learning interaction participation, perception, and learning satisfaction', *Computers & Education*, 61 (2013), 43-51 (pp. 43-44; 49-50); Alex Kumi-Yeboah and Patriann Smith, 'Relationships Between Minority Students Online Learning Experiences and Academic Performance', *Online Learning*, 20 (2016), pp. 2-3; Susan Lowes, Peiyi Lin, and Brian R.C. Kinghorn, 'Gender Differences in Online High School Courses', *Online Learning*, 20 (2016), pp. 102; 113-114; Kwame Akyeampong et. al., 'Prioritizing learning during COVID-19: The most effective ways to keep children learning during and postpandemic', (Washington D.C., London, Florence: The World Bank, FCDO, and UNICEF Office of Research – Innocenti, 2022), pp. 6; 14-15.

6 — Kim M. Thompson and Clayton Copeland, 'Inclusive considerations for optimal online learning in times of disasters and crises', *Information and Learning Sciences*, 121 (2020), 481-486 (pp. 481-482; 486).

7 — Muljana and Luo, pp. 29-31; Mansureh Kebritchi, Angie Lipschuetz, and Lilia Santiago, 'Issues and Challenges for Teaching Successful Online Courses in Higher Education: A Literature Review', *Journal of Educational Technology Systems*, 46 (2017), 4-29 (pp. 7-11); Youngju Lee and Jaeho Choi, 'A review of online course dropout research: implications for practice and future research', *Educational Technology Research and Development*, 59 (2011), 593-618 (pp. 604-608).


8 — Lee and Choi, pp. 605; 608-610; Muljana and Luo, pp. 25-29; Kebritchi, Lipschuetz, and Santiago pp. 11-21.

9 — Florence Martin, Ting Sun, and Carl D. Westine, 'A systematic review of research on online teaching and learning from 2009 to 2018', *Computers & Education*, 159 (2020), 1-17 (pp. 7-9); Sidney K. D'Mello, 'Improving student engagement in and with digital learning technologies', *OECD Digital Education Outlook 2021: Pushing the Frontiers with Artificial Intelligence, Blockchain, and Robots*, (2021), pp. 81-82.

Key recommendations

In reviewing research on engagement in online learning the following four key recommendations emerged:

1. Create a user-friendly



digital learning environment

Create user-friendly digital environments by surveying participants (and using this data to inform programme design) and supporting participants to be more comfortable using digital platforms and technology. These steps will help to ensure learners have the correct foundations to have a positive experience on the programme and develop a sense of control over their learning experiences.

2. Support learner wellbeing



and preparation

Support participants' wellbeing and prepare them for online learning by: understanding young people's situations and challenges; equipping young people with the technical and soft skills required to succeed in online learning; considering wellbeing in design elements; and providing opportunities for interaction. This will help to ensure that participants are in a strong position to feel confident participating, engaging and interacting in online learning.

3. Cultivate community,



communication and collaboration

Cultivate a supportive community and enhance communication, interaction and collaboration by: providing learners with opportunities to interact; encouraging and valuing various types of participation; and embracing personalised and collaborative learning in smaller groups. This will help to ensure that participants benefit from the increased opportunities for communities to take shape.

4. Pay careful attention to learning design



and facilitation

Develop engaging and flexible online courses with effective facilitation by: ensuring that courses include opportunities for self-directed learning that are scaffolded (i.e. assisted by facilitators) to ensure learners are supported; using a range of learning formats; making content inclusive and relevant to participants; providing opportunities for facilitator-learner interaction; and providing timely feedback. This will help to ensure that participants are able to successfully learn and engage in online programmes.

What does research say about young people's engagement in online programmes?



Introduction

This report has reviewed a selection of relevant research on engagement in online learning. It is not intended to be exhaustive but instead to draw out some key ideas in the literature about how to increase and enhance engagement online. This introduction sets out the context. A brief overview of research is then provided before four key areas are discussed. This research review is situated in the context of online learning and understanding and measuring engagement – therefore, the following points provide useful background information.

Issues surrounding access to and inclusion in digital programmes are critical considerations.

The shift to online that emerged in March 2020 as a result of the COVID-19 pandemic impacted every aspect of daily life.

Education was hugely disrupted as schools and universities rapidly moved their services online to replace face-to-face teaching, affecting 1.6 billion learners globally.¹⁰ This unplanned and obligatory shift during a time of crisis was not online learning but Emergency Remote Education (ERE).¹¹ This also affected careers education: in the UK, there was an 18 percentage-point decrease in the number of school pupils who had workplace experiences in 2021 compared to 2019.¹²

Access to careers support in universities plummeted in 2021 with half of students not accessing any support at all.¹³

10 — Elham Hussein et. al. 'Exploring undergraduate students' attitudes towards emergency online learning during COVID-19: A case from the UAE', *Children and Youth Services Review*, 119 (2020), 1-7 (p. 1).

11 — Bozkurt et. al., p. 2.

12 — The Careers and Enterprise Company, '2021: Trends in Careers Education', (2021), p. 7.

13 — Youth Employment UK, 'Youth Voice: Census Report 2021' (2021), p. 10.

Similarly, in the UK, 83% of charities moved their services online and experienced related, though not identical, challenges to those faced in the education sector.¹⁴

The shift online highlighted the extent of the digital divide between those with access to high-speed internet, up-to-date technology, and a quiet space in which to learn, and those whose internet access (where it existed at all) might come through a smartphone or a desktop computer in a shared space. The digital divide thus emphasises how a user's device affects their engagement with online learning; addressing this means auditing the devices individuals intend to use to access programmes.¹⁵

However, digital inclusion is as much about programme design as it is about access to devices. As Netta Iivari, Sumita Sharma, and Leena Ventä-Olkkonen explain in a recent article, the 'digital divide is not merely about access or use of digital technology, but about being able to integrate digital technology into meaningful social practices (Livingstone & Helsper, 2007; Mariën & Prodnik, 2014; Warschauer, 2002) and to gain benefits of it (Song et al., 2020).¹⁶

Indeed, Una Cunningham, Kristy Beers Fägersten, and Elin Holmsten described students' experiences on an English for Academic Purposes course at Dalarna University, Sweden, where most students' first language was not English and

14 — Zoe Amar and 'The Skills Platform, 'Charity Digital Skills Report 2021', (Bristol, 2021), pp. 11; 35.

15 — Learning and Work Institute, 'The impact of moving employability training online: A review of EY Foundation programme delivery during lockdown', (Leicester, 2021), p. 6; Stephen J. Aguilar, 'Guidelines and tools for promoting digital equity', *Information and Learning Sciences*, 121 (2020), 285-299 (pp. 285-286).

16 — LNetta Iivari, Sumita Sharma, and Leena Ventä-Olkkonen, 'Digital transformation of everyday life – How COVID-19 pandemic transformed the basic education of the young generation and why information management research should care?', *International Journal of Information Management*, 55 (2021), 1-6 (p. 1).

students had a wide range of first languages.¹⁷ They noted that students faced difficulties due to both limited English proficiency and technical difficulties.¹⁸ However, students were also able to use the online platform to communicate in multiple ways showing how **problems are 'both exacerbated and ameliorated' by the online environment.**¹⁹ The authors concluded that 'Net-based language learning and teaching is a demanding application for new technology, but **pedagogical considerations must be at the center, not the technology.**'²⁰

Moreover, in a recent article, Lesley Gourlay reminds us that we need to consider the materiality of online learning (i.e. the physical aspects of learning online - challenging the idea that digital technologies enable a break from the restrictions of materiality) and raises critical questions about the nature of absence and presence and the salience of materiality and home working spaces.²¹ Indeed, this challenges notions of an idealised fantasy of online learning with perfect home setups and speaks instead to the inequalities found in home working spaces. In an article examining the role of local contexts in online learning, Ståle Angen Rye and Anne Marie Støkken suggested that there is a role for instructors to make programmes more inclusive but a starting point must be acknowledging that 'online global collaboration typically reflects inequality, not equal collaboration.'²²

17 — Una Cunningham, Kristy Beers Fägersten, and Elin Holmsten, "Can you hear me, Hanoi?" *Compensatory Mechanisms Employed in Synchronous Net-Based English Language Learning*, *International Review of Research in Open and Distance Learning*, 11 (2010), 161-177 (pp. 161-162).

18 — Ibid, p. 161.

19 — Ibid, pp. 161; 163; 173-174.

20 — Ibid, p. 174.

21 — Lesley Gourlay, 'There Is No 'Virtual Learning': The Materiality of Digital Education', *Journal of New Approaches to Educational Research*, 10 (2021), 57-66 (pp. 57-61).

22 — Ståle Angen Rye and Anne Marie Støkken, 'The implications of the local context in global virtual education', *The International Review of Research in Open and Distributed Learning*, 13 (2021), 191-206 (p. 203).

Stephen J. Aguilar similarly presents the argument that the digital equity gap is not simply about those who have access to technology and those who do not but about the disconnect that exists between course design and understanding learners' situations.²³ **Effective online learning, therefore, has to begin with careful and intentional design which understands learners' access requirements and caters for them.**

Therefore, the design of online learning is at least as important as the medium through which it is delivered and Emergency Remote Education (ERE) is not the same as quality online learning.

Online learning research has commented on the importance of remembering this latter point and not judging the potential of online by experiences of ERE.²⁴ There is a substantial difference between online education and ERE: online education has been offered in its current form for at least two decades whereas ERE was a rapid transfer of traditional methods to online environments engendered by the COVID-19 pandemic.

Moreover, Muzammal Ahmad Khan observes 'that the jury remains both unconvinced and undecided' on online education's effectiveness. Indeed, online education has many benefits such as increased flexibility, self-paced learning, saved time, and increased accessibility for people who would not otherwise be able to benefit (e.g. because of geography or work, study or personal commitments).²⁵ These benefits can all be harnessed – with the right design.²⁶

23 — Aguilar, pp. 286-287; 291-292.

24 — Reynolds and Chu, p. 233; Bozkurt et. al., p. 2.

25 — Muljana and Luo, pp. 20-21; Tabarrok.

26 — Muzammal Ahmad Khan, (2021), 'COVID-19's Impact on Higher Education: A Rapid Review of Early Reactive Literature', *Education Sciences*, 2-14 (p. 7).

Introduction

Studies comparing online and face-to-face delivery suggest that the medium itself does not significantly impact learner outcomes.²⁷

There is evidence to suggest that it is the pedagogical differences in teaching and content and how these interact with technology that drives different outcomes. As Sandy Baum and Michael McPherson explain, the challenge is 'integrating the strengths of technology with the unique qualities of the social process of education'.²⁸

Young people, some more than others, face barriers in online learning, and programmes need to be designed intentionally to overcome them.

Online learning can mean more tailored learning and individualised experiences. However, young people's lives are far from homogenous and they face varied and varying challenges – with some groups being significantly impacted by the shift to online.²⁹

Research has also shown that different outcomes are achieved in online learning based on factors relating to, among others, ethnicity, age, gender, socio-economic background, and educational background – and existing educational disparities are exacerbated in online settings.³⁰

This highlights the need to support underrepresented and underserved learners to address these differential outcomes in online learning. Programme design choices may include or exclude certain groups or individuals and so

27 — Nortvig, Petersen and Balle, p. 48; Means et. al., pp. ix; xvii; Baum and McPherson, pp. 48-50.

28 — Baum and McPherson, p. 249.

29 — Ibid, p. 239-241.

30 — Ibid, pp. 239-241; Ke and Kwak, pp. 43-44; 49-50; Kumi-Yeboah and Smith, pp. 2-3; Lowes, Lin, and Kinghorn, pp. 102; 113-114; Akyeamong et. al., pp. 6; 14-15.

it is essential to understand the different barriers groups face; **inclusive design is critical to ensure that online learning supports all young people.**³¹

Indeed, online education research has focused on challenges to online learning surrounding learners, instructors, and content.³² Factors including time management, low motivation, technical problems, not having space at home, uncertainty around participating, and, particularly in studies focusing on the impact of COVID-19, issues related to mental health have all been identified as barriers to participation in online settings.³³

In a systematic review of factors contributing to student retention in online learning, Pauline S. Muljana and Tian Luo examined factors at the institutional, instructor and learner levels and identified the following factors as potential barriers to online learning: institutional support, programme difficulty level, promotion of a sense of belonging, facilitator presence, course design, behavioural characteristics, and demographic and other personal variables.³⁴ This review has focused on learner related factors. This means that the focus is on creating a programme that works for young people and fits their needs.

31 — Thompson and Copeland, pp. 481-482; 486.

32 — Kebritchi, Lipschuetz, and Santiago, p. 22.

33 — María Cruz López-de-Ayala and Ricardo Vizcaino-Laorga (2021), 'Participation of young people in online social communities: an exploration of attitudes among university students in a case study in Spain', *KOME – An International Journal of Pure Communication Inquiry*, (2021), pp. 4-5; Stephanie MacMahon, Jack Leggett, Annemaree Carroll, 'Promoting individual and group regulation through social connection: strategies for remote learning', *Information and Learning Sciences*, 121 (2021), 353-363 (p. 355); Nani-gopal Kapasia et. al. (2020), 'Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India', *Children and Youth Services Review*, 116 (2020), 1-5 (p. 4); Mahmoud Maqableha and Mohammad Aliab, 'Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India', *Children and Youth Services Review*, 128 (2021), 1-11 (p. 10); Patricia Fidalgo et. al., 'Students' perceptions on distance education: A multinational study', *International Journal of Educational Technology in Higher Education*, 17 (2020), 1-18 (p. 15).

34 — Muljana and Luo, pp. 25-31.

Online learning brings new challenges, however, not least the fact that "engagement" (whatever we mean by that) is different.

Engagement is one of the most studied areas within the field of online education and it is commonly accepted that engagement in online settings is relatively lower than in person.³⁵

Stephan Vincent-Lancrin has stated: 'Ensuring that students did not "drop out" and remained engaged in their learning in spite of the difficulties was probably one of the biggest challenges during the first wave of the health crisis.'³⁶ Enhancing engagement is a challenge for online learning. **Yet the first challenge is to define and measure exactly what we mean by engagement.**

In contrast to face-to-face settings where attendance is often the primary indicator of engagement, the promise of online is that a great deal more data can be collected – with all the positives and uncomfortable truths that this might reveal. Online engagement behaviours bring definitional questions to the foreground.

A range of definitions are proposed in the academic literature and in a recent systematic review of online learning the topic of engagement has been presented as a broader category encompassing seven sub-categories: **presence, interaction, community, participation, collaboration, involvement and communication.**³⁷

Any online programme for young people needs to consider engagement in broader, more complex terms that looks across these areas.

35 — Martin, Sun, and Westine, pp. 7-9; Muljana and Luo, pp. 21.

36 — OECD and The World Bank, 'How Learning Continued during the COVID-19 Pandemic', (2022), p. 27.

37 — Martin, Sun, and Westine, pp. 7-9.

Patterns of behaviour are different online and allow learners to engage with programmes in more complex ways.

This means the measurement of engagement needs to be different too.

Understanding online engagement demands that charities have an awareness of the different ways young people engage as well as the measurement framework and infrastructure to capture it. Sidney K. D'Mello argues that 'Improving engagement in the context of digital learning is first and foremost a measurement and theoretical challenge.'³⁸ **Before you can hope to enhance engagement you have to first ask what are we measuring and how will we measure it?**

The answer has three components:

The first is a question of **data collection**. For example, using an online learning environment and communication platforms that enable usage logs, recording attendance to live sessions, and monitoring learner progress through self-reflection is essential.

The second is a question of context to develop **benchmarks for expected engagement**. For instance, MOOCs have been found to have a median completion rate of 12.7%, studies have contended that completion rates are up to 20% lower in online courses compared to traditional ones, and the Edge Foundation's report showed that between one third and one-quarter of school children were not engaging in learning during lockdowns.³⁹

38 — D'Mello, p. 84

39 — Muljana and Luo, p. 21; Katy Jordan, 'Massive Open Online Course Completion Rates Revisited: Assessment, Length and Attrition', *International Review of research in Open and Distributed Learning*, 16 (2015), 341-358 (p. 341); The Edge Foundation, 'The Impact of Covid-19 on Education: Perspectives on the impact of lockdown', (2021), p.4.

Introduction

This does not mean that benchmarks should simply be lowered for online settings. It means that they need to be developed for an online context.

Unlike in face-to-face settings, in an online programme it is possible to not attend any synchronous sessions and still be engaged (e.g. by watching session recordings, contributing to asynchronous discussions, or completing individual learning activities.)

The third is a question of **definitions** and inclusion. The literature has proposed various definitions of engagement and participation. Some have argued for a dichotomy of active and passive participation, whereas others have advanced the idea that participation is more than what one would classify under 'active' forms such as messages posted or the number of logins.⁴⁰

For instance, Orna Farrell and James Brunton note that engagement 'can be defined as "a student's emotional, behavioural, and cognitive connection to their study."⁴¹ D'Mello describes several useful definitions and theoretical frameworks for understanding engagement.

He notes the consensus in the research that engagement is multidimensional and that it cuts across the behavioural (i.e. participation), cognitive (i.e. investment in the learning), affective (i.e. learning and attitudes), and the agentic (i.e. proactive contributions).⁴²

He also describes the Interactive-Constructive-Active-Passive (ICAP) model – **passive engagement might mean viewing a lecture, active engagement might mean taking verbatim notes, constructive engagement might mean summarising notes by adding new ideas or reorganising old ideas, and interactive engagement consists of interaction or dialogue alongside a constructive activity.**⁴³

D'Mello cautions against problematic frameworks that equate usage with engagement because this considers 'only one dimension (behavioural) of a multi-dimensional construct.'⁴⁴ Similarly, Susan Lowes, Peiyi Lin, and Brian R.C. Kinghorn note Elaine Chapman's helpful definition developed for face-to-face learning of 'activity-as-participation – for instance, attending class and submitting assignments – and activity-as-interaction – the sustained involvement in learning activities involving cognitive, behavioral, and affective aspects.'⁴⁵ Furthermore, Stefan Hrastinski described how participation not only involves action, such as talking, but also connection – the feeling of taking part – and 'internal dialogue, such as thinking and reflecting (Holmberg, 1989)'.⁴⁶

Hrastinski defines it as 'a complex process that includes, for example, doing, talking, thinking, feeling and belonging. In short, participation involves everything we do and feel when being part of engaging experiences.'⁴⁷ In doing so, he describes 'low' forms such as quantifiable platform usage data, and 'high' forms that employ this data but combine it with an understanding of participation as more complex and social,

subsequently positioning learner reflections as essential for measuring engagement.⁴⁸

María Cruz López-de-Ayala and Ricardo Vizcaíno-Laorga describe how 'For Kim & Ketenci (2019), there are three levels of participation: the peripheral participant, inbound participant, and full participant' and 'According to Nielsen (2006), participation is distributed following the 90:9:1 rule (90% inactive, 9% occasional participants, 1% active).'⁴⁹

They also note that personality and demographic factors will influence participation behaviours.⁵⁰ In a study of first-year university students enrolled on a statistics course, Dirk Tempelaar, Quan Nguyen, and Bart Rienties noted four different engagement patterns – 'nonactive, active before tutorial, active before quiz, and active before exams.'⁵¹ Tempelaar, Nguyen, and Rienties suggested that: 'In order to design effective intervention, it is crucial to consider different profiles of learners based on their engagement patterns.'⁵²

In summary, the literature argues that there are various ways to engage in online learning. Definitions should be flexible to allow for people to engage to the same effect but in different ways that suit them, which in turn allows for more inclusive measures of engagement.⁵³ This could mean developing personas based on engagement rather than an oversimplified notion of engaged/not engaged.

40 — Kebritchi, Lipschuetz, and Santiago, p. 10; López-de-Ayala and Vizcaíno-Laorga, pp. 2-3; Stefan Hrastinski, 'A theory of online learning as online participation', *Computers & Education*, 52 (2009), 78-82 (pp. 79-81); Stefan Hrastinski, 'What is online learner participation? A literature review', *Computers & Education*, 51 (2008), 1755-1765 (pp. 1756-1760-1761).

41 — Orna Farrell and James Brunton, 'A balancing act: a window into online student engagement experiences', *International Journal of Educational Technology in Higher Education*, 17 (2020), 1-19 (p. 2).

42 — D'Mello, pp. 81-82.

43 — Ibid, pp. 89-90.

44 — Ibid, pp. 83; 85.

45 — Lowes, Lin, and Kinghorn, p. 101.

46 — Hrastinski, 'A theory of online learning', p. 79.

47 — Ibid, p. 81.

48 — Ibid, pp. 89-90.

49 — López-de-Ayala and Vizcaíno-Laorga, pp. 2-3.

50 — Ibid, pp. 3-5.

51 — Dirk Tempelaar, Quan Nguyen, and Bart Rienties, 'Learning Analytics and the Measurement of Learning Engagement', in Ifenthaler, Dirk and Gibson, David eds. *Adoption of Data Analytics in Higher Education Learning and Teaching*, (Springer, Cham, 2020), pp. 159-176.

52 — Ibid.

53 — Kebritchi, Lipschuetz, and Santiago, p. 10.



Overview of online learning research

The term 'online learning' was first used in 1995 with the advent of the learning management system WebCT, later known as Blackboard.⁵⁴

Online learning has grown in popularity over the past two decades and the sudden shift to online during the COVID-19 pandemic has accelerated this trend. Vandana Singh and Alexander Thurman have studied definitions of "online learning" within academic research and found confusion over the term – with 46 different definitions that have emerged as technology itself has changed.⁵⁵

More broadly, there are various types of online education. Synchronous courses are where all teaching happens live with participants attending at a specified time, whereas asynchronous courses enable students to access online content at times that work for them. Blended courses are where some elements are delivered online and some in person. MOOCs (Massive Open Online Courses) were introduced in 2006 and consist of free open content to a large number of participants. Finally, open schedule courses are where deadlines exist, but students can learn at times that suit them.⁵⁶

Online learning research has steadily increased over the past two decades as online education has continued to gain popularity across various educational settings. More broadly, the field of distance education is well established with prominent journals and several decades of research.⁵⁷ Online learning research has mostly focused on higher education, although continuing education and K-12 have also been

studied.⁵⁸ Florence Martin, Ting Sun, and Carl D. Westine have noted that systematic reviews covering specific areas, such as higher education, synchronous learning and K-12, have been conducted more frequently than reviews covering the field as a whole and that their recent systematic review of the field of online learning has provided the first such review in a decade.⁵⁹

They highlighted key trends in the field from 2009 to 2018 and grouped research into 12 themes across learner, course, instructor and institutional categories, with the most studied themes falling into the learner category, specifically engagement and learner characteristics.⁶⁰

Most work has focused on online learning in higher education.⁶¹ Key issues in the literature relate to learners, instructors and content, and key themes within the learner category include readiness, expectations, identity and participation⁶² – echoing many of those in the field more widely. Research often focuses on three points of interaction as learner-learner, learner-instructor and learner-content.⁶³ Research into K-12 settings comprises a smaller body within the field and is scattered across many journals, making it more difficult for researchers to discern key trends.⁶⁴

The field is growing at an accelerated pace and starting to produce more inferential data-based articles compared to the earlier focus on theory-based research.⁶⁵ Since the academic literature has focused on higher education, K-12,

and continued education, applying its lessons to a youth employability programme needs some consideration. It is important to design online courses that are supported by the literature.⁶⁶

At the same time, as Rebecca Reynolds and Samuel K. W. Chu state: 'Any set of guidelines is only as helpful as its capacity to be customized for local contexts and evolving pandemic conditions across time.'⁶⁷ Studies can contain valuable lessons for other contexts⁶⁸ – but they need to be appropriately adapted.

Researchers have also studied issues related to inclusion. In their systematic review of online learning research, Martin, Sun, and Westine note that learner characteristics was the second-largest research theme.⁶⁹ Research has drawn attention to the differential outcomes achieved in online learning related to factors, among others, such as ethnicity, age, gender, socio-economic background, and educational background – and existing inequalities are exacerbated online.⁷⁰

Furthermore, Fengfeng Ke and Dean Kwak noted Robin Goodfellow and Anne Hewling's assessment that 'cultural issues in an online learning environment were related to two major themes: the development of inequities arising from dominant cultural values embodied in teaching materials and methods (e.g., Gunawardena, Wilson, & Nolla, 2003), and the potential miscommunication among participants during online interactions, arising from cultural

difference (e.g., Wong & Trinidad, 2004).⁷¹ For example, **Ke and Kwak examined age and ethnicity in online learning and found that minority ethnic students had a positive perception of instructor interaction but lower satisfaction overall and were less confident and comfortable to take online courses.**⁷²

Susan Lowes, Peiyi Lin, and Brian R.C. Kinghorn found that gender was important for determining online behaviours and specifically that female students were more engaged in online discussions compared to male students but that differences by gender were larger for those who earned lower grades, suggesting that communication with peers may be more important to females.⁷³

Therefore, they emphasise the importance of gender differences in course design and note that if peer interaction is a goal then it should be rewarded – they suggested that, in their example, giving it formal credit might have encouraged males to engage more in forum discussions and females might have received more credit for the time they spent on this.⁷⁴ Furthermore, the literature has pointed out that **there is a clear role for facilitators in ensuring that online learning is inclusive; recommended instructional strategies include: not having a one-dimensional approach; promoting social connection; valuing socio-cultural differences and respecting the presence of all diverse groups; supporting minority students; and incorporating diversity into the curriculum.**⁷⁵

54 – Vandana Singh and Alexander Thurman, 'How Many Ways Can We Define Online Learning? A Systematic Literature Review of Definitions of Online Learning (1988-2018)', *American Journal of Distance Education*, 33 (2019), 289-306 (p. 289).

55 – Ibid, pp. 289; 291.

56 – Fidalgo et. al., p. 2.

57 – Karen T. Arnesen et. al., 'K-12 online learning journal articles: trends from two decades of scholarship', *Distance Education*, 40 (2019), 32-53 (p. 50).

58 – Martin, Sun, and Westine, p. 10.

59 – Ibid, pp. 4; 7-10.

60 – Ibid, pp. 4; 7-11

61 – Ibid, p. 10.

62 – Kebritchi, Lipschuetz, and Santiago, pp. 7-11.

63 – Hrastinski, 'A Theory of Online Learning', p. 79.

64 – Arnesen et. al., p. 50.

65 – Ibid, p. 50.

66 – Jonan Phillip Donaldson, 'Building a digitally enhanced community of practice', *Information and Learning Sciences*, 121 (2020), 241-250, (p. 248).

67 – Reynolds and Chu, p. 233.

68 – Ibid, p. 235.

69 – Martin, Sun, and Westine, p. 9.

70 – Ke and Kwak, pp. 43-44; 49-50; Kumi-Yeboah and Smith, pp. 2-3; Lowes, Lin, and Kinghorn, pp. 102; 113-114; Akyeampong et. al., pp. 6; 14-15.

71 – Ke and Kwak, p. 43

72 – Ibid, p. 50.

73 – Lowes, Lin, and Kinghorn, pp. 102; 113.

74 – Ibid, pp. 113-114.

75 – Yeobah and Smith, p. 19; Ke and Kwak, p. 50; Rye and Støkken, p. 203; Krystle Phirangee and Alesia Malec, 'Othering in online learning: an examination of social presence, identity, and sense of community', *Distance Education*, 38 (2017), 160-172 (p. 162).

Overview of online learning research

A more recent body of work has emerged focusing specifically on the impact of COVID-19 on online learning. The first systematic review of this literature has noted that it has explored: the difference between emergency remote education and online education; shifts to emergency assessment; the importance of learners' wellbeing and the psychological impact of COVID-19; key challenges for online learning and recommendations for overcoming them; and collaborative cultures.⁷⁶

Most studies have been completed on educational institutions in the US, though there have been studies on a range of specific countries and institutions, alongside some globally focused work.⁷⁷ Most studies have used online questionnaires for students and staff to better understand the shift online.⁷⁸ There has been a range of perspectives offered on the experience of online education but broadly students have adapted well, although less privileged students are less satisfied.⁷⁹ Studies that have focused on mental health and wellbeing have indicated COVID-19's negative impact and the importance of acknowledging this when designing and delivering online learning.⁸⁰

Furthermore, a particularly insightful special issue, 'Evidence-based and Pragmatic Online Teaching and Learning Approaches: A Response to Emergency Transitions to Remote Online Education in K-12, Higher Education, and Librarianship' (parts 1 and 2), has been published in *Information and Learning Sciences*.⁸¹

76 — Khan, pp. 7-9.

77 — Ibid, p. 4.

78 — Ibid, pp. 4-5.

79 — Hussein, et. al., p. 2.

80 — Ibid, p. 6; Kapasia et. al., p. 4; Najmul Hasan and Yukun Bao, 'Impact of "e-Learning crack-up" perception on psychological distress among college students during COVID-19 pandemic: A mediating role of "fear of academic year loss"', *Children and Youth Services Review*, 118 (2020), 1-9 (p. 7). Reynolds and Chu.

81 — Reynolds and Chu.

The articles have been written to help educators use evidence to optimise the impact of emergency remote education. As a result of the rapid turnaround in publication, they have not been subject to the usual peer-review standards, but they are nevertheless insightful. Nora McIntyre suggests that, broadly, students have adapted well to the shift online and showed digital confidence and readiness.

She also reveals how students want quality education, social connection, and choice of online resources from their online learning experiences.⁸²

D'Mello describes how learning engagement research 'has exploded in past years' and how **engagement is broadly seen as important for learning.**⁸³ **He suggests that this is for at least two reasons; engagement is a prerequisite for learning, and engagement involves 'cognitive and socio-emotional skills that are learning objectives in themselves'.**⁸⁴

He examines digital learning technologies noting that progress in the past two decades present new opportunities for measurement, theories, and pedagogical design.⁸⁵

At the same time, he notes that there is unsurprisingly a mixed evidence base so far.⁸⁶ He also reminds us that despite the quality of data collected it is not in-depth enough, such that shallow measures of engagement that focus on behaviour (i.e. number of logins) prevail.⁸⁷

82 — Nora McIntyre, 'What does post-pandemic educational research tell us about online learning experiences?', *iSENDEi*, (2021), (<https://www.insendi.com/news-and-updates/what-does-post-pandemic-educational-research-tell-us-about-online-learning-experiences>) [accessed February 2022].

83 — D'Mello, pp. 80; 95.

84 — Ibid, p. 79.

85 — Ibid, p. 79.

86 — Ibid, p. 79.

87 — Ibid, p. 96.

He makes a plea for education and scientific research in this area to converge so that we can achieve efficient, effective and engaging digital learning with the right safeguards, ethical data practices, and unbiased models.⁸⁸

In terms of defining and measuring engagement, **D'Mello notes that engagement is difficult to define but that a consensus exists that suggests engagement is a multidimensional concept cutting across the behavioural (i.e. participation), cognitive (i.e. investment in the learning), affective (i.e. learning and attitudes), and the agentic (i.e. proactive contributions).**⁸⁹

He notes that the first three of these components stemmed from a 2004 seminal article by Jennifer A Fredericks, Phyllis C Blumenfeld and Alison H Paris, with the fourth recently suggested by Johnmarshall Reeve and Ching-Mei Tseng.⁹⁰ These components should be considered alongside time-course (i.e. duration of engagement) and context (i.e. interactions with others and surroundings).⁹¹

D'Mello explains that traditional measures of engagement include self-reports, observations and behaviours – and that online engagement is problematically synonymous with usage which considers 'only one dimension (behavioural) of a multi-dimensional construct'.⁹² To increase engagement, two broad approaches, which can also be combined, have surfaced – proactive and reactive.⁹³ Proactive approaches see the promotion of states conducive to engagement and the reduction of those not conducive – this

88 — Ibid, p. 96.

89 — Ibid, pp. 81-82.

90 — Ibid, p. 81.

91 — Ibid, p. 82.

92 — Ibid, pp. 83; 85.

93 — Ibid, p. 89.

can take shape in 'light touch' approaches (e.g. gamification or emotional design) or attempts to deeply engage learners.⁹⁴ Regarding these deeper approaches, he draws on the Interactive-Constructive-Active-Passive (ICAP) model that charts anticipated engagement across a spectrum.⁹⁵

Passive might mean viewing a lecture; active might mean taking verbatim notes; constructive might mean summarising notes by adding new ideas or reorganising old ideas; and interactive consists of interaction or dialogue alongside a constructive activity.⁹⁶ **In contrast, reactive approaches are more sophisticated and assume that engagement is fluid – and so engagement is monitored and responses vary according to the learner.**⁹⁷

The large focus on learner engagement in academic research sits alongside the well-established understanding across the field that dropout rates are relatively higher in online courses.⁹⁸ This is especially the case for non-credit informal settings.⁹⁹ The reasons for attrition and recommended strategies to address them are well documented. Muljana and Luo have commented that, whilst the explanation for attrition is ultimately a multitude of factors, research examining how these factors connect is scarce.¹⁰⁰

94 — Ibid, pp. 89-91.

95 — Ibid, pp. 89-90.

96 — Ibid, p. 89.

97 — Ibid, pp. 92-93.

98 — Ritanjali Panigrahi, Praveen Ranjan Srivastava, and Dheeraj Sharma (2018), 'Online learning: Adoption, continuance, and learning outcome—A review of literature', *International Journal of Information Management*, 43 (2018), 1-4 (p. 1); Johanna Nieuwoudt, 'Exploring online interaction and online learner participation in an online science subject through the lens of the interaction equivalence theorem', *Student Success*, 9 (2018), 53-62 (p. 54).

99 — Alison Anderson Holland, 'Effective principles of informal online learning design: A theory-building metasynthesis of qualitative research', *Computers & Education*, 128 (2019), 214-226 (p. 215).

100 — Muljana and Luo, p. 23.

Overview of online learning research

Factors relating to learners themselves include: psychological indicators, skills, behavioural characteristics, demographic variables, and other personal variables.¹⁰¹

Psychological indicators, skills and behavioural characteristics include: self-regulation, metacognition, self-efficacy, self-discipline, motivation, confidence, self-determination, time management, having a high internal locus of control, learning satisfaction, goal setting and commitment, coping strategies, resilience, and using technology.

Demographic variables include, among others: ethnicity, gender, age, socio-economic background, academic background, educational level, and previous relevant experiences.¹⁰²

Other personal variables include: supportive environments, support from friends, family, work, emotional support, and life circumstances, family support, home environment, work and other commitments, financial issues, issues related to health and disability, perceived ease of use of technology, and technological limitations.¹⁰³

Factors in terms of pedagogy, instructors, and content include: having clear and established support systems for both academic and emotional purposes, course design, programme quality, administrative and institutional support, orientation, student interaction with peers and instructors and student participation, having a well-designed curriculum with a clear structure, content that is relevant to participants' experiences and that is not too easy or too difficult but 'just right', effective facilitation of engagement,

and promoting a sense of belonging, interaction with content, facilitators, and other learners, opportunities for interaction, interactive activities, timely feedback, and prompt support to struggling students.¹⁰⁴

One study showed that time spent viewing content was a more reliable indicator of successful outcomes than more typically 'active' forms of participation such as the number of posts in forums.¹⁰⁵ Factors associated with adoption and continuation have also been studied; those associated with adoption typically concern attitude and perceived usefulness whilst those associated with continuation typically concern experience and satisfaction.¹⁰⁶

The factors related to individuals' experiences of technology include 'satisfaction, confirmation, self-efficacy, flow, trust, we-intention (broadly, orientation towards the group and shared tasks as a whole, see Panigari below), sense of belongingness, immersion, IS qualities (information, system, and service qualities).¹⁰⁷ Environmental factors have also been noted, including having other work and family commitments and insufficient support from family, friends, or colleagues.¹⁰⁸

Finally, Muljana and Luo make an important point: institutions may be concluding attrition incorrectly.¹⁰⁹ Labelling those who do not enrol without giving notice as "dropped out", they note, risks excluding participants who may be participating in a non-typical fashion.¹¹⁰

101 — Ibid, pp. 29-31; 37; Kebritchi, Lipschuetz, and Santiago, pp. 7-11; Lee and Choi, pp. 604-608.

102 — Ibid.

103 — Ibid.

104 — Lee and Choi, pp. 604; 608-609; Muljana and Luo, pp. 25-27; 35-36; Panigrahi, p. 10.

105 — Hrastinski, 'A theory of online learning', p. 79; Lee and Choi, p. 609.

106 — Panigrahi, Srivastava, and Sharma, p. 11.

107 — Ibid, p. 10.

108 — Lee and Choi, p. 610.

109 — Muljana and Luo, p. 36.

110 — Ibid.

Measuring learning engagement is a major research theme and the field of learning analytics specifically has grown since 2011.¹¹¹

Learning analytics is about using data generated by students from learning environments to support students and inform effective design for learning.¹¹² The Society of Learning Analytics Research (SoLAR) centre organises events, supports collaborative research, disseminates publications, and advises governments.¹¹³

New technologies in digital learning are promising new ways of measuring engagement – these have so far been mostly confined to labs but are starting to move into classrooms.¹¹⁴

The field has moved from being about retention to understanding processes and social practices of learning.¹¹⁵ The promise is that learning analytics can create tailored learning journeys and put students in control of their learning experiences.¹¹⁶

However, it is subject to ethical concerns around data privacy issues, bias in models, and **feelings of surveillance which is particularly an issue for historically marginalised populations.**¹¹⁷ It has also been critiqued for diminishing the role of the human teacher.¹¹⁸

111 — Tempelaar, Nguyen, and Rienties; Rogers Kaliisa et. al., 'Social learning analytics in computer-supported collaborative learning environments: A systematic review of empirical studies', *Computers and Education Open*, 3 (2022), 1-11 (p. 1).

112 — Kaliisa et. al., p. 1; Yi-Shan Tsai, 'Learning Analytics in a Nutshell', *Society for Learning Analytics Research (SoLAR)*, (<https://www.solaresearch.org/about/what-is-learning-analytics/>) [accessed March 2020].

113 — Society of Learning Analytics Research (SoLAR), (<https://www.solaresearch.org/>) [accessed March 2022].

114 — D'Mello, p. 79.

115 — Kaliisa et. al., p. 1.

116 — Yi-Shan Tsai.

117 — D'Mello, p. 86.

118 — Bart Rienties, et. al., 'Effective usage of learning analytics: what do practitioners want and where should distance learning institutions be going?', *Open Learning: The Journal of Open, Distance and e-Learning*, 35 (2020), 178-195 (p. 179).

Moreover, it has an inconclusive evidence base and there is not a clear understanding of what works.¹¹⁹ D'Mello suggests that there could be a path forward that retains integrity and provides an enhanced digital learning experience.¹²⁰

In addition to academic literature, there are some useful reports and resources on this subject. Notably, The Learning and Work Institute's (L&W) evaluation of the EY Foundations' shift to online and a McKinsey & Company report on online learning in higher education. Quality Matters also have useful checklists for emergency online education.

Finally, deepr have worked with Catalyst and presented five conditions for design that fosters human connection online. The L&W report has helpfully examined what a shift to online entails for a charity delivering services to young people (note the EY Foundation work predominantly with 16-18-year-olds.)

They provide key recommendations across setting up, identifying when face-to-face matters, valuing digital communication, delivering inclusive programmes, keeping participants engaged, and getting feedback and improving.¹²¹

The McKinsey report, 'Setting a new bar for online higher education', has developed a valuable rubric for quality online higher education with eight dimensions across three overarching principles of creating a seamless journey, adopting an engaging approach to teaching, and building a caring network.¹²²

119 — Ibid, p. 188; D'Mello, p. 79.

120 — D'Mello, pp. 95-96.

121 — Learning and Work Institute, pp. 6-9.

122 — Felipe Child et. al., 'Setting a new bar for online higher education', *McKinsey & Company*, (2021), (<https://www.mckinsey.com/industries/education/our-insights/setting-a-new-bar-for-online-higher-education>) [accessed February 2022].

Overview of online learning research

The Quality Matters checklist for emergency online education includes recommendations such as: **providing learners with clear guidance and instructions on course materials, support, resources, expectations; encouraging peer introductions on online forums and participating in discussions; providing timely feedback and making clear how course content leads to achieving course objectives; employing multimedia and online tools for interaction; and organising course content for students.**¹²³

Finally, deepr have presented five conditions for effective human connection in digital services.

These include: presence, to ensure that people are engaged; equality, to minimise power imbalances; accountability, meaning people feel invested in relationships; autonomy, where people have agency and choice; and whole self, ensuring people can be safe in fully expressing who they are.¹²⁴

There have also been several reports published examining the impact of COVID-19 on education. These contain helpful information about the range of responses that were seen and provide helpful lessons for the future.

A report on 'Prioritising Learning During Covid-19' by the Global Education Evidence Advisory Panel (GEEAP) examines the impact of school closures on education and makes a series of recommendations about how best to support learning during and after the pandemic.

¹²³ — Quality Matters, 'QM Emergency Remote Instruction Checklist for Higher Ed', (2020), (<https://docs.google.com/document/d/e/2PACX-1vRzSgvQZDAbu9iG3Cxn-q3D2hlxiUZrzwVRj94MGPVDvY9exqxiSgOkuhKxkexPSxb12cb3QNqDTWSic/pub>) [accessed February 2022].

¹²⁴ — deepr, 'Framework for Human Connection' (https://www.deepr.cc/framework?utm_source=Catalyst&utm_campaign=f629615435-EMAIL_CAMPAIGN_5_5_2021_12_19_COPY_01&utm_medium=email&utm_term=0_7b925a1063-f629615435-416517482) [accessed February 2022].

It shows that educational inequalities have increased during the pandemic and that school closures had detrimental impact on learning and on students' and teachers' mental health – with impact on mental health more pronounced for women, those with poor general health status, those from a lower socioeconomic status, and those from a disadvantaged ethnic minority.¹²⁵

In setting out a series of recommendations, it addresses both immediate policy actions prioritising keeping schools open where possible and longer-term approaches based on lessons learned.

Some notable recommendations include: providing structured pedagogical support for teachers to be implemented along with feedback, monitoring, and accountability; adjusting instruction with tailored support to ensure learners receive the help they need and can catch up to reduce educational inequalities; and leveraging existing technology, noting how the pre-Covid literature showed that online learning is not about simply providing devices and rather careful design is needed, especially in an area without a strong evidence base.¹²⁶

In 'The impact of the COVID-19 pandemic on education' by UNESCO and the International Association for the Evaluation of Educational Achievement (IEA), findings are presented from the Responses to Educational Disruption (REDS) survey that gathered rigorous data across 11 countries to understand the impact of the pandemic on education and inform policymakers planning for recovery.

¹²⁵ — Akyeampong et. al., pp. 6-9; 14-16.

¹²⁶ — Ibid, pp. 23-26.

Notably, the report states that teachers often felt it was difficult to provide the support lower-achieving and vulnerable students needed and that vulnerable students were more likely to fall behind.¹²⁷

'How Learning Continued during the COVID-19 Pandemic' by OECD and The World Bank examines 45 case studies of 'educational continuity stories', and sets out useful context with broad key lessons.

Among other issues, these draw attention to: the importance of supporting the whole child, i.e. attending to all needs, not just academic ones; the need to provide quality education to disadvantaged children and young people; and that thriving communities are the answer, not more technology.¹²⁸

¹²⁷ — Sabine Meinck, Julian Fraillon, Rolf Strietholt, eds., 'The impact of the COVID-19 pandemic on education: International evidence from the Responses to Educational Disruption Survey (REDS)', (2022), pp. xvii-xix.

¹²⁸ — OECD and The World Bank, pp. 88; 97; 100.



The digital learning environment

This report is not aiming to address the issue of digital exclusion that stems from digital poverty and lack of access to devices and networks.

Those are critical aspects that require attention but they are outside the scope of this report – a useful Catalyst blog by Joe Roberson contains strategies for addressing digital exclusion in this context focusing on both accessibility requirements and a lack of physical access.¹²⁹

Instead, **this report starts from the assumption that service users have the technology they require to access – and jumps off from the point in the previous section that the design of online learning is at least as important as the medium through which it is delivered.**

In other words, the challenge for online learning is to integrate other factors with technology.¹³⁰

These other factors include: participant wellbeing, readiness and support; community and peer-to-peer interaction; facilitator interaction and feedback; and course design and structure.

Before discussing in more detail how each of these in turn can be optimised for online programmes this section sets out key recommendations for developing online learning environments themselves

Consult participants to understand their digital setups and use this data to enhance programme design and delivery.

Research highlights the importance of surveying

129 — Joe Roberson, 'Five ways charities have reduced digital exclusion through their services', Catalyst, (2021), (https://www.thecatalyst.org.uk/resource-articles/charities-digital-exclusion?utm_source=Catalyst&utm_campaign=80f5bb8e11-EMAIL_CAMPAIGN_5_5_2021_12_19_COPY_01&utm_medium=email&utm_term=0_7b925a1063-80f5bb8e11-416517482#) [accessed February 2022].

130 — Nortvig, Petersen and Balle, p. 48.

participants to understand their digital setups.¹³¹

Data about young people's digital workspaces and readiness can be collected during the pre-programme onboarding stage.

This information is then available to be used in designing the programme and understanding the training and support participants need. As part of the special issue in Information and Learning Sciences, Stephen J. Aguilar provides two instruments that educators can use to understand young people's digital access setups – the Digital Equity Gap interview protocol and the Digital Equity Gap Survey.¹³²

These contain questions to collect useful data such as the number and types of devices that participants have access to, including ones they share, their network access, and the availability of study spaces. They also contain questions about the support structures for remote learning, indicators of economic distress, and indicators of community support.

The author strongly advises going through the correct institutional channels before conducting the interviews and/or surveys. They are designed for K-12 use but can be adapted for an older audience.¹³³

Digital access surveys give teams the evidence to address digital equity gaps. Aguilar explains that the **digital equity gap is not simply a binary between those who have all the access needed and those who do not have any, but instead 'results from a gap in understanding on the part of well-intentioned educational organizations that wish to implement novel, technology-driven**

131 — Bozkurt, p. 88; Aguilar, pp. 285-286; Learning and Work Institute, p. 6.

132 — Aguilar, pp. 289-291.

133 — Ibid, p. 289

approaches without sufficiently investigating what is possible within the communities they serve'.¹³⁴

Depending on time and resources, relatively simple design choices can be made that reduce the burden placed on the technological infrastructure. For example, asynchronous activities can enable young people to access the content at times that work for them.¹³⁵ This can help to alleviate the pressure of not having space to learn all of the time depending on shared devices and workspaces at home.

Another example is using free and open-access materials such as open educational resources (OER) since, alongside being easily accessible, this can reduce the burden on instructor time and enhance online learning by broadening the range of teaching styles participants are exposed to.¹³⁶

This means students can learn the same information in various ways, and have more choice and control over their learning.¹³⁷ Social media can also increase engagement, opportunities for interaction, and community building.¹³⁸ Instant messaging can also be a useful, familiar tool for increasing communication and participation.¹³⁹

134 — Ibid, p. 292.

135 — Hussein, p. 6.

136 — Bozkurt, p. 89.

137 — Marcus L. George, 'Effective Teaching and Examination Strategies for Undergraduate Learning During COVID-19 School Restrictions', Journal of Educational Technology Systems, 49 (2020), 23-48 (p. 45).

138 — Congying Shao, 'A Literature Review of Factors Related to Teaching that Influence the Quality of Online Education', 2021 2nd International Conference on Computers, Information Processing, and Advanced Education, (2021), 1321-1327 (p. 1323).

139 — Florence Martin, Lynn Ahlgrim-Delzell, and Kiran Budhrani, 'Systematic Review of Two Decades (1995 to 2014) of Research on Synchronous Online Learning', American Journal of Distance Education, 31 (2017), 3-19 (p. 16).

"The digital readiness survey was a key way for us to identify participants who may have digital access needs before the programme started. It was a way for us to shape conversations during pre-programme phone calls (offered to all participants) so that we could identify the type of support needed. Generally speaking everyone accessing the programme had a device which was able to connect to data (either broadband or mobile data) in order to access sessions and wrap around materials. The larger issues lay around access to a private, quiet working space and access to reliable data connections.

Thinking firstly about access to private space. We were able to support a small number of participants to access quiet working spaces such as local libraries by reimbursing travel costs. Secondly, most of the time an unreliable data connection did not seem to cause an issue or prevent participation in sessions. Although Zoom is quite a big drain of data, most participants were able to access sessions. We used low bandwidth interactive platforms wherever possible to ensure that devices would not crash when using these alongside Zoom. For the small number of participants who were not able to connect to data, we were able to reimburse an additional mobile data package and support them to work with their existing provider to organise this."

Programmes Delivery Team

The digital learning environment

Design online environments that are easy to use and provide a clear participant learning journey.

Online learning platforms replace the physical classroom in online learning. They can offer multiple uses such as sharing learning materials and course information, chat functions and interactions, accessing live sessions, and assessments/quizzes.¹⁴⁰

Research suggests that it is important to create a user-friendly digital environment that makes it easy for young people to navigate the course and have control of their learning.¹⁴¹

Young Kim and Daradirek “Gee” Ekachai note how researchers have studied the formats of online syllabi to understand their potential uses and influences on course-taking intentions and student engagement.¹⁴²

Kim and Ekachai also explain that several researchers have suggested that course syllabi are more than a contract between the tutor and the learner – they are also a way for learners to navigate the course and grasp key concepts, and they promote a sense of transparency and intuition.¹⁴³

In a recent study, Kim and Ekachai compared the impact on student intention and engagement of placing a syllabus on a tutor’s personalised own website with a syllabus on a learning management system (LMS).

¹⁴⁰ — Maqableha and Aliab, pp. 4-5.

¹⁴¹ — Felipe Child et. al.; Holland, pp. 218-220; Maqableha and Aliab, pp. 6; 10; Young Kim and Daradirek “Gee” Ekachai, ‘Exploring the Effects of Different Online Syllabus Formats on Student Engagement and Course-Taking Intentions’, *College Teaching*, 68 (2020), 176-186 (pp. 177; 182).

¹⁴² — Kim and Ekachai, p. 177.

¹⁴³ — Ibid, pp. 176-177.

They found that students were more likely to take and engage with a course if they accessed the syllabus on the tutor’s website than the LMS.¹⁴⁴

This has two key implications.

First, it highlights that the format of an online learning environment is important.¹⁴⁵ Paying attention to the design of these environments is vital to promote learner engagement.

Second, the distinctive features of the preferred platform provide some directions for designing environments – the study suggests that the stronger visual appeal and the encouragement of online use were key factors supporting the preferred platform (the LMS had more text-based and downloadable content).¹⁴⁶

Another critical aspect of the digital environment concerns giving learners clear and informative course materials that help them to see the educational roadmap. In a recent McKinsey article, Felipe Child et. al. recommend that online courses create a seamless journey by providing a clear education roadmap and connections.¹⁴⁷

This involves design elements such as ensuring content is accessible in a range of settings (e.g. on the go, on a mobile, in low bandwidth areas) alongside giving learners informative materials and an ability to track and understand the status of their progress.

Child et. al. describe how these design features respond to barriers to online learning such as increased distractions, the need for flexibility,

¹⁴⁴ — Ibid, p. 181.

¹⁴⁵ — Ibid, p. 182.

¹⁴⁶ — Ibid, p. 182.

¹⁴⁷ — Felipe Child et. al.

and higher levels of anxiety.¹⁴⁸

Research also suggests that providing clear and user-friendly digital environments enhances learner choice and control – a key student priority highlighted in the post-pandemic online learning literature.¹⁴⁹

In a meta-synthesis of informal online learning, Alison Anderson Holland describes **the importance of clear titling and tagging of content** within the theoretical framework of heutagogy (broadly defined, self-determined learning).¹⁵⁰

By making content easy to navigate and find learners can have more control over the content they access.¹⁵¹

Again, this also responds to the particularities of online learning where learners often have other commitments and require flexibility.

Similarly, a study of a digital electronics course at a university in Trinidad and Tobago found that **students appreciated both an interactive online environment and a clear course workbook.**¹⁵²

In addition to designing environments with these aspects in mind, training and supporting participants is also critical.

¹⁴⁸ — Ibid. ¹⁴⁹ — McIntyre.

¹⁴⁹ — McIntyre.

¹⁵⁰ — Holland, pp. 215; 219-220.

¹⁵¹ — Ibid, p. 219.

¹⁵² — George, p. 46.

The digital learning environment

Train and support young people in the digital literacy skills needed for the programme and beyond.

Digital literacy level is a key barrier to online learning and learners have varying levels of readiness and technology skills.¹⁵³

Online courses also require participants to learn how to use new bespoke platforms – a recent study of students at a university in Jordan found that on average students needed to learn and use 2-3 different platforms.¹⁵⁴

It is important to prepare and support learners to be able to use the tools on the programme. The L&W evaluation of the EY Foundation's online programmes recommends videos, factsheets and drop-in sessions as possible methods for this.¹⁵⁵

Digital literacy also includes softer skills related to computer and internet self-efficacy.¹⁵⁶

Higher levels of internet self-efficacy – an individual's perception of their ability to complete tasks using the internet – have been linked with improved performance in online courses.¹⁵⁷

The L&W evaluation also recommends that participants are briefed before the programme on expected online behaviours and the support they will receive from facilitators.¹⁵⁸ It has also been recommended that tech support is provided for learners.¹⁵⁹

In summary, by surveying participants and using this data to inform programme design, creating engaging and user-friendly digital environments, and supporting participants to develop their digital literacy, learners will have the correct foundations to have a positive experience on the programme and develop a sense of control over their learning experiences.



¹⁵³ — Maqableha and Aliab, pp. 6; 9-10; Kebritchi, Lipschuetz, and Santiago, pp. 8-9; Bozkurt et. al., p. 8.

¹⁵⁴ — Maqableha and Aliab, p. 4.

¹⁵⁵ — Learning and Work Institute, pp. 6; 36.

¹⁵⁶ — Kebritchi, Lipschuetz, and Santiago, p. 9.

¹⁵⁷ — Ibid, p. 9.

¹⁵⁸ — Learning and Work Institute, pp. 6; 36.

¹⁵⁹ — Muljana and Luo, pp. 32; 35-36.



Learner wellbeing and preparation

Supporting wellbeing and pastoral support is a critical part of creating encouraging learning environments.

The field of online learning has shown the importance of enabling students to develop a sense of identity and control in their learning experiences and to feel like a valued part of a community.¹⁶⁰

The early reactive literature on online learning and COVID-19 particularly highlighted the importance of caring for learners' mental health and wellbeing in online education.

Many students in these studies reported increased mental health and psychological issues such as feeling bored, lonely, anxious and worried about learning loss.¹⁶¹

One of the earliest studies found that students reported high levels of stress, depression and anxiety.¹⁶² This was also linked to feelings of isolation and underlines the importance of providing strong support structures.¹⁶³

Aras Bozkurt et. al. draw attention to the fact that **a pedagogy of care – i.e. where 'care, inclusion, compassion, and empathy' are embedded in learning practices – has been put in the spotlight during COVID-19 but that it has always been essential.**¹⁶⁴ Studies have shown that supporting learners' wellbeing is the primary concern during times of disruption.¹⁶⁵

160 — Kebritchi, Lipschuetz, and Santiago, pp. 9-10; Bozkurt et. al., p. 3; Nortvig, Petersen and Balle, pp. 50-53; Panigrahi, Srivastava, and Sharma, p. 11.

161 — Maqableha and Aliab, pp. 8-10; Hussein, p. 2; Hasan and Bao, pp. 5-7; Aleksander Aristovnik et. al., 'Impacts of the COVID-19 Pandemic on Life of Higher Education Students: A Global Perspective', Sustainability, 12 (2020), 1-34 (pp. 10-12).

162 — Kapsia et. al., p. 4.

163 — Aristovnik et. al., p. 11; Hussein, p. 6.

164 — Bozkurt et al., p. 4.

165 — Ibid, p. 8; Hussein, p. 6.

Understand young people's situations and challenges.

Alongside understanding young people's digital access setups, it is also important to understand their situations, challenges and struggles.

Bozkurt et. al. propose that 'thinking about learners beyond their role in the classroom to the difficulties they may be facing in their personal lives' is a key initial step towards supporting students in their learning.¹⁶⁶

They recommend educational institutions conduct a needs-based analysis of students to understand the barriers they face.¹⁶⁷

Understanding learners in their fuller lives beyond the classroom is part of a process of developing support strategies. These strategies might include: flexibility, clear communication, and specific course design practices to increase enjoyment and build social capital.¹⁶⁸

In the Edge Foundation's report on COVID-19's impact on education, Paul Newton suggests that as well as understanding group effects we need to understand individual reasons for learning loss from the perspective of 'each and every student, individually'.¹⁶⁹

Patricia Fidalgo et. al. suggest that surveys might be conducted before enrolment to understand a learner's readiness to take distance education courses.¹⁷⁰

166 — Bozkurt, p. 8.

167 — Ibid, p. 88.

168 — Ibid, p. 4.

169 — The Edge Foundation, p. 8.

170 — Fidalgo et. al., p. 15.

"Every young person on an UpRising programme receives a pre-programme phone call to understand their needs and availability and ascertain what further ongoing support is needed from the team."

Programmes Delivery Team

Equip young people with the technical and soft skills required to succeed in online learning.

Learner characteristics are among the most studied topics in online learning research.¹⁷¹ Participants will inevitably have widely varying characteristics that influence their levels of engagement and success in online learning.

In their systematic review, Martin, Sun, and Westine group learner characteristics into six research themes; self-regulation, motivation, academic, affective, cognitive, and demographic.¹⁷²

A study of 24 university Humanities students enrolled on an online course at Dublin City University (DCU) found that good time management and organisation skills were associated with a positive impact on engagement.¹⁷³

It reported the potential difficulty in managing online learning alongside other commitments and the ways that poor time management can lead to stress, anxiety, and attrition.¹⁷⁴

Opportunities for developing skills, confidence

171 — Martin, Sun, and Westine, pp. 7; 9.

172 — Ibid, p. 9.

173 — Farrell and Brunton, p. 16.

174 — Ibid.

and self-regulation were associated with engagement and success.¹⁷⁵

This shows the importance of equipping participants with the skills required to engage effectively in online learning and their longer-term development.

This is an important point to consider in context since the majority of research concerns higher education and K-12 settings where programmes are much longer-term than many of those offered by charities.

For example, the DCU approach included skills development modules in year one of a degree course and further supplemented online skills seminars throughout the year.

The importance of supporting participants to develop skills is amplified in programmes aimed at underrepresented and underserved young people. Baum and McPherson have commented that students with more exposure to technology and better time management skills, and who are more adept at self-directed learning adapt better to online education than others.¹⁷⁶

They also note that outcomes are worse for underrepresented, underserved and less prepared students – in particular that males, Black students, students with lower academic performance, and part-time students struggle with adjusting to online.¹⁷⁷

In a similar vein, Anne-Mette Nortvig, Anne Kristine Petersen and Søren Hattesen Balle describe the importance in online learning of a strong sense

175 — Ibid.

176 — Baum and McPherson, p. 240.

177 — Ibid, pp. 239-241.

Learner wellbeing and preparation

of learner identity which is linked to feelings of control and belonging to a community – and how **learning identities are therefore central to having the confidence to participate.**¹⁷⁸

Pre-course skills support is therefore beneficial – though the practical implications of this require a process of contextualising solutions.

Elham Hussein et. al. suggest developing self-directed and time management skills through 'fostering values of commitment, adaptation, integrity and self-reliance'.¹⁷⁹

Fidalgo suggests that courses might be provided to build skills and behaviours based on students' concerns.¹⁸⁰

The McKinsey report by Child et. al. points out how a pre-course assessment that enables students to confirm their knowledge of some of the course content can increase confidence.¹⁸¹

Research has also highlighted the value of training to ensure learners are confident using digital tools.¹⁸²

Some practical recommendations for learners provided in the literature include: taking good notes; using a diary to manage time; following a schedule; staying connected and interacting with peers and facilitators; rotating between subjects to avoid burnout; designating a space to study; and reducing distractions.¹⁸³

Moreover, Mansureh Kebritchi, Angie Lipschuetz,

and Lilia Santiago describe the importance of readiness in online learning and they point to the readiness instrument developed by Min-Ling Hung et. al. consisting of questions across five key dimensions of online learning readiness: self-directed learning, motivation for learning, computer and Internet self-efficacy, online communication self-efficacy, and learner control.¹⁸⁴

They suggest that this instrument could be used to understand learners' readiness for online learning and provide support to those less well-prepared.¹⁸⁵

178 – Nortvig, Petersen and Balle, p. 50.

179 – Hussein et. al., p. 6.

180 – Fidalgo et. al., p. 15.

181 – Child et. al.

182 – Aristovnik et. al., p. 19.

183 – Baum and McPherson, p. 246; Bozkurt et. al., p. 89; Career Communications Group, 'Education: Getting the most out of online learning', US Black Engineer and Information Technology, 44 (2020), 11-11 (p. 11).

184 – Kebritchi, Lipschuetz, and Santiago, p. 9.

185 – Ibid, p. 9; Min-Ling Hung et. al., 'Learner readiness for online learning: Scale development and student perceptions', Computers & Education, 55 (2010), 1080-1090 (pp. 1088-1089).

Consider wellbeing in design elements

Mahmoud Maqableha and Mohammad Aliab suggest considering wellbeing, financial needs and work-life balance when designing programmes.¹⁸⁶

Keeping student wellbeing in mind in the design of programmes is critical and there are several steps that can be taken to ensure programmes are supportive and inclusive.

Particularly during times of disruption, educators should avoid overwhelming learners with assignments, which in a charity programme context might also extend to administrative tasks, feedback forms, and learning exercises.¹⁸⁷

The L&W evaluation suggests implementing blurred backgrounds and headphone use as standard practice which can help ensure that people do not feel self-conscious about noises and their home study environments.¹⁸⁸

Another study suggests that a combination of broader elements such as attractive learning materials, efficient online environments, and secure internet access can improve learner experience and mental health.¹⁸⁹

Kim M. Thompson and Clayton Copeland have provided invaluable practical steps that educators can take to make programmes more inclusive and accessible taking into account visual, hearing, neurodiversity, and mobility needs.¹⁹⁰

They suggest that these design tips will both support students with disabilities and improve the learning experience more generally.¹⁹¹

They also suggest that implementing such features will develop a culture of awareness of different needs and make students feel comfortable expressing their needs without the label of ability or disability.¹⁹²

For example, their recommendations include: **providing documents in multiple formats; using accessibility tool checkers; providing alt text to images; having both the speaker's face and slides on screen; providing handouts and transcripts; having regular opportunities for help chats and check-in calls; communicating clear expectations across the course (e.g. in chat functions how often people are expected to post); and having shared notes taken and shared.**¹⁹³

186 – Maqableha and Aliab, p. 11.

187 – Hussein et. al., p. 6.

188 – Learning and Work Institute, p. 8.

189 – Hasan and Bao, p. 7.

190 – Thompson and Copeland, pp. 483-485.

191 – Ibid, p. 482.

192 – Ibid, p. 485.

193 – Thompson and Copeland, pp. 483-485.

Learner wellbeing and preparation

Furthermore, Krystle Phirangee and Alesia Malec describe how dropout can stem from feelings of isolation and disconnection which arise from a process of othering.¹⁹⁴

They also note that dropout has been associated with conflict of cultural beliefs and miscommunication:

'We argue that othering adversely affects learners' participation within an online course. Learners bring their individual identities with them to an online course and incongruencies between their own identities and the dominant group identity contribute negatively to fostering social presence and participation.'¹⁹⁵

There is an active role for the facilitator in moderating behaviours that might "other" some students.¹⁹⁶

Phirangee and Malec also suggest the importance of not prioritising one idea over another and establishing social presence and community.¹⁹⁷

Paul Flynn has presented a 'DESIGN-ED toolkit' drawing on design thinking and using this in an educational setting to present strategies for moving online in a K-12 context.¹⁹⁸

This consists of a five-step process that centres on student support.

The first step is empathy and understanding the needs of students and Flynn provides a useful empathy map for planning this. He also suggests "getting to know you" sessions for programmes where students are new to each other.

The second step is definition, to understand the whole class's needs.

The third step is ideation, where educators implement what would have been done in a physical classroom in the digital classroom to address individual, group, communication, and technological needs across physical, digital, and teacher response perspectives. He also provides a useful template for this step.

Fourth is prototyping, where lesson planning focuses on the transfer to online and is especially useful in considering pedagogical decisions ahead of time and considering equity access to online learning. He also provides a useful template for this step.

Finally, the last step is to test and reflect thinking back to previous steps. Flynn notes that at this stage it is important to pay attention to innovation as well as review what worked and what did not work.¹⁹⁹

Provide opportunities for interaction.

The importance of cultivating a sense of community is explored more fully in the next section.

However, it is useful to mention here in relation to participant wellbeing because of the support system that a community provides.

Baum and McPherson suggest that interaction in learning fulfils two broad functions; first, it supports emotional wellbeing and promotes good study habits, and second, it is more conducive to learning.²⁰⁰

They also describe how an isolated student is more likely to blame themselves for their struggles because they cannot also see others experiencing struggles and asking for help.²⁰¹ This is a point picked up elsewhere.

Farrell and Brunton describe how **peer communities were perceived as 'an essential source of support, reassurance, encouragement and human connection' and how isolation is associated with disengagement.**²⁰²

Youngju Lee and Jaeho Choi's systematic review drew on the framework of Kember's 1995 model of student integration.²⁰³

This model explains how learners either pursue a path of social integration to academic compatibility or external attribution to academic incompatibility and that failure to integrate social demands with study obligations is attributed by the student to external factors beyond their

control.²⁰⁴ Hence, research underlines the significance of social integration with peers and tutors for engagement.

In summary, by centring young peoples' wellbeing in programme designs and preparing participants for online learning they will be in a strong position to feel confident participating, engaging and interacting in online learning.

194 — Phirangee and Malec, p. 160.

195 — Ibid, p. 163.

196 — Ibid, p. 162.

197 — Ibid, p. 169.

198 — Paul Flynn, 'DESIGN-ED: a pedagogical toolkit to support K-12 teachers' emergency transition to remote online education', Information and Learning Sciences, 121 (2020), 331-339 (pp. 331-332).

199 — Ibid, pp. 334-338.

200 — Baum and McPherson, pp. 245-247.

201 — Ibid, p. 246.

202 — Farrell and Brunton, p. 15.

203 — Lee and Choi, pp. 594-595.

204 — Ibid.



Community, communication and collaboration

In an insightful article in *Daedalus*, Baum and McPherson describe how the ways that we use technology are underpinned by cultural assumptions.²⁰⁵

They comment, for example, that educational broadcasts through radio and television embodied the belief that transmission of information through lecture formats was the most significant method of learning. Online learning, Baum and McPherson argue, has been slow to change and move away from a mass transfer of information from tutors to learners.²⁰⁶

This is despite the **overwhelming consensus that learning is social and that community, communication and engagement are critical to online learning.**²⁰⁷ Indeed, the focus in online learning has traditionally been on self-directed learning.²⁰⁸

Felipe Child et. al. also underscore the importance of **building a caring network and suggests that support is offered alongside the creation of a community** – they note, for instance, that social events can be an effective way of enhancing community.²⁰⁹

Provide multiple diverse opportunities for interaction and value different types of participation.

Jonan Phillip Donaldson explains how Communities of Practice (CoPs) – 'communities which share a common framework of knowledge, skills, beliefs and practices' – have traditionally been understood as organic and emerging.²¹⁰

However, Donaldson notes that Digitally Enhanced Communities of Practice (DECoPs) have been understood as being able to be planned and created.²¹¹

It has been suggested that courses should provide opportunities for learner-learner and learner-facilitator collaboration and interaction as this will both increase engagement in the materials and improve peer-to-peer connection and reduce loneliness.²¹²

Farrell and Brunton suggest that both formal and informal communities are important and in their study found that three types of community emerged; the official institutional community, the student-led community, and smaller study groups.²¹³

They also suggest that **having multiple ways of interacting is important to meet the diverse needs of a group of students, as they found that forums worked well for some participants but did not for others.**²¹⁴

Lily Gaberee et. al. have recommended allowing participants (over time, as confidence grows) to

take on the role of facilitators to both develop skills and enhance the community.²¹⁵

This helps build community, they explain, because it encourages learners to develop a sense of shared ownership over the learning.²¹⁶

Furthermore, Holland has described the importance of allowing learners to engage in ways that work for them as part of an 'engagement spectrum' encompassing, for example, 'passive information acquisition, personal reflection, discussion-based processing, and building or generating something new.'²¹⁷

Similarly, Donaldson describes the features that cultivate a digitally enhanced community of practice; some crucial components include having different levels of engagement and legitimising peripheral participation and avoiding criticising it.²¹⁸

Notably, one study comparing posting and viewing variables in an online course found that variables related to time spent viewing content were the predictors of final grades.²¹⁹

The importance of letting participants communicate in ways that work for them and encouraging but not requiring camera use was also noted in the L&W evaluation.²²⁰

Therefore, **alongside providing a range of different ways that people can interact research suggests that different types of engagement should be valued and encouraged.**

This understanding of engagement can inform the ways that measuring engagement takes place.

"Our main aim throughout our programmes is to cultivate a supportive community in a safe learning environment.

Participants are allocated an UpRising point of contact for the duration of the programme.

This member of staff is responsible for checking in weekly to support learning and general wellbeing as well as being the main contact for any queries or concerns throughout the programme offering that consistency of support and clarity of point of contact.

In addition to this, we have members of staff on hand to support and facilitate the building of community through our Slack messaging platform.

They respond to questions promptly, moderate the chat and then add helpful hints, tips and resources throughout each day."

Programmes Delivery Team

205 — Baum and McPherson, pp. 235-238.

206 — Ibid.

207 — Dianne Conrad, 'Building and Maintaining Community in Cohort-Based Online Learning', *Journal of Distance Education*, 20 (2005), 1-20 (p. 2); Baum and McPherson, pp. 245-247; Muljana and Luo, p. 37; Nortvig, Petersen and Balle, p. 53; Lily Gaberee et. al., 'Designing creative and connected online learning experiences', *Information and Learning Sciences*, 121 (2020), 655-663 (pp. 656-657).

208 — Hrastinki, 'A theory of online learning', p. 81.

209 — Child et. al.

210 — Donaldson, p. 241.

211 — Donaldson, pp. 241-242.

212 — Bozkurt et. al., p. 89; Hussein et. al., p. 6.

213 — Farrell and Brunton, pp. 15-16.

214 — Farrell and Brunton, p. 15.

215 — Gabaree et. al., p. 659.

216 — Ibid.

217 — Holland, p. 219.

218 — Donaldson, pp. 242-248.

219 — Kebritchi, Lipschuetz, and Santiago, p. 10-11.

220 — Learning and Work Institute, p. 8.

Community, communication and collaboration

Create smaller groups, make activities personal, and employ collaborative learning tools.

Research has suggested that larger communities are typically weaker because they are uncontrolled and that **smaller groups are preferable**.²²¹

However, whereas in face-to-face settings smaller communities can form in the same room, enabling this to happen in an online setting requires further design reconsideration.

The EY Foundation created social bubbles on their programmes to enable people to develop confidence and navigate the course with a small group of friends they are familiar with.

Gabaree et. al. suggest making activities personal to enable participants to facilitate connection and get to know each other as “whole” people.²²²

They give examples from an online creative learning course where participants were invited to share an object from their childhood that influenced them.²²³

Moreover, they present a useful model for online sessions that prioritises learners getting to know each other – “connect, share, and reflect” – as used in the online creative learning course.

It consists of: welcoming and introductions as facilitators explain the main themes of the day; reflecting on the course ideas together in breakout rooms of six; and then regathering in the main room to share reflections from their breakout

221 — López-de-Ayala and Vizcaino-Laorga, p. 3; Gabaree, p. 658.

222 — Gabaree, pp. 657-658.

223 — Ibid, p. 657.

rooms.²²⁴

Facilitators help to draw together reflections from across the groups.

They also explain that with ‘the challenges of sharing speaking time in online spaces, we recommend using chat features, allowing for rapid sharing and reactions’.²²⁵

This practical implication aligns with the theoretical recommendations explored above of enabling diverse ways of participating. Some participants might be happier to share over the chat function whilst others might want to speak on camera.

Multiple studies recommend the use of **collaborative learning tools**.²²⁶ These do not need to be complex because it is the way they are employed to facilitate learning that is important. For example, collaboration scripts, Google Docs, gPortfolios, and Wikis are all recommended options.²²⁷

Sebastian Strauß and Nikol Rummel describe collaboration scripts that are effectively prompts and guidance for learners.²²⁸

At their simplest these are written documents and instructors can use existing scripts or create their own. To create one, instructors should first identify the learning aspect they are aiming to develop

224 — Ibid, p. 658.

225 — Ibid.

226 — Bozkurt et. al., p. 89; Sebastian Strauß and Nikol Rummel, ‘Promoting interaction in online distance education: designing, implementing and supporting collaborative learning’, *Information and Learning Sciences*, 121 (2020), 251-260 (pp. 251-252); Xinran Zhu et. al., ‘Reading and connecting: using social annotation in online classes’, *Information and Learning Sciences*, 121 (2020), 261-271 (p. 262); Daniel Hickey et. al., ‘gPortfolios: a pragmatic approach to online asynchronous assignments’, *Information and Learning Sciences*, 121 (2020), 273-283 (pp. 273-274).

227 — Bozkurt et. al., p. 89; Strauß and Rummel, pp. 255-256; and Zhu et. al., p. 262; Hickey et. al., pp. 273-274.

228 — Strauß and Rummel, pp. 255-256.

and then determine if learners require additional support such as sentence openers.²²⁹

The community can be further enhanced through asynchronous learning supported by activities which employ social or web annotation and gPortfolios, as these enable peer connection and shared learning.

Web annotation is a communal reading of materials and sharing thoughts and ideas such as through tracked changes on a Google Doc.²³⁰

Xinran Zhu et. al. set out four recommendations for implementing this strategy effectively.²³¹

First, facilitators should articulate the learning goals at the outset.

Second, they should select appropriate tools such as Diigo, Hypothes.is, and Google Docs.

Third, facilitators should decide how far they will be involved. Facilitator support might be required, for instance, to provide prompting questions and reading strategies, and smaller groups will generate more unique ideas by avoiding ‘annotation saturation’.²³²

Lastly, an evaluation plan should be put into place that might focus on multiple areas such as learning outcomes, usability, inclusivity and socio-emotional factors.²³³

Zhu et. al. also note that some tools have usage data such as Hypothes.is.²³⁴

229 — Ibid.

230 — Zhu et. al., pp. 262; 267.

231 — Ibid, pp. 266-268.

232 — Ibid, p. 267.

233 — Ibid, pp. 267-268.

234 — Ibid, p. 268.

Furthermore, gPortfolios are a similar idea where learners post responses to assignments in forums and learners and instructors discuss posts in threaded comments. Daniel Hickey et. al. discuss this within the concepts of Productive Disciplinary Engagement (PDE) and expansive framing.²³⁵

Put simply, these ideas propose that by positing learners as the experts and applying content to relevant situations learners are more likely to transfer their learning to new settings.²³⁶

Finally, it is important to balance collaborative learning with individual learning.

The ‘didactic envelope’ concerns cultivating activities that both prepare and respond to collaborative learning activities; Strauß and Rummel provide the example of each participant reading a different text and then coming together to discuss them.²³⁷

In summary, by providing learners with opportunities to interact, encouraging and valuing various types of participation, and embracing personalised and collaborative learning in smaller groups, participants will benefit from the increased opportunities for communities to take shape. This section has predominantly focused on peer-to-peer interaction and the importance of cultivating a sense of community. Learner-content and learner-facilitator are also critical points of interaction. The next section explores the pedagogical roles of content and instructors in relation to enhancing engagement.

235 — Hickey et. al., pp. 274-275.

236 — Ibid.

237 — Strauß and Rummel, pp. 256-257.



Learning design and facilitation

Course design and facilitation are relatively less studied in the academic literature compared to topics relating to learners and Martin, Sun, and Westine have commented that there is a need for further studies in course design.²³⁸

In their 2011 systematic review of drop-out factors, Youngju Lee and Jaeho Choi observed a pattern where student-related factors were the most associated with attrition yet recommended strategies to overcome attrition predominantly concerned course and programme factors.²³⁹

Student-related factors such as academic background and relevant experiences, skills, and psychological attributes, they commented, are more difficult to address than course design, support, and interaction.²⁴⁰

Lee and Choi did also note **the effectiveness of clearly communicating expectations before a programme and of sending helpful reminders rather than overwhelming prospectuses at the start of a programme.**²⁴¹

Congying Shao has reviewed the literature on quality online learning from the perspective of online teaching, observing that an 'effective learning ecology' consists of careful planning relating to learners, content, and instructors.²⁴²

Course design consists of 'the curriculum, content and materials, delivery methods, learning activities, type and degree of interaction and communication during courses, and class management'.²⁴³

Best practices include: effective course design, strategic use of multimedia, content relevant to students' experiences and interests, smaller class sizes, self-directed learning, opportunities for instructor interaction, and timely feedback.²⁴⁴

In the McKinsey report, Child et. al. recommend a range of learning formats, captivating experiences, adaptive learning, and real-world skills application.²⁴⁵

For example, they note how Outlier provides high-quality videos where the content follows a storyline and each lesson feeds into an overarching journey.²⁴⁶

The L&W evaluation recommends short interactive sessions, flexible courses, scheduled breaks, preparation work, links between activities, and that learning is tracked.²⁴⁷

Create a balance between guided and self-directed learning, use a range of learning formats, and make content inclusive and relevant to participants.

There are varying perspectives on how much choice and structure online courses should contain.

Lee and Choi cited a 2008 study that found no correlation between increased peer interactions and course persistence and suggested that those signing up to online programmes are perhaps more in favour of self-directed learning and the flexibility offered by an online course.²⁴⁸

They suggested that asynchronous discussion boards can be a space where the community can still develop.²⁴⁹

Self-paced learning is also effective, as is giving learners choice and regular engagement with instructors, peers, and subject matter.²⁵⁰

Constructivist learning approaches are an established consensus in the field and researchers also agree on the value of a social element in learning.²⁵¹

Yet online learning simultaneously presents a challenge because it is different to a typical classroom setting and many of its benefits stem from its flexibility.

Richard Allen Carter Jr. et. al. have picked up on the 'complex relationship between the affective need for control and the cognitive need for

structure'.²⁵² Their work is specifically aimed at a K-12 context but contains lessons for online learning generally.

They explain that proponents of Self-Regulated Learning (SRL) advocate flexibility, choice, and self-directed learning whereas Cognitive Load Theory (CLR) posits that this can be overwhelming and confusing.²⁵³

They suggest scaffolding techniques as a middle-of-the -road solution to the tension between these two perspectives.

These techniques include: using tools to organise course content within the course design; asking students to consider how they learn online; providing pacing support (whilst appreciating how different technology will likely mean different learning speeds); and monitoring engagement with materials.²⁵⁴

Support mechanisms might also include providing help guides and videos.²⁵⁵

As a result of these supports, learners can access the benefits of self-directed learning.

It is also recommended that **educators provide both synchronous and asynchronous classes.**²⁵⁶

The scaffolding strategies to respond to this complex relationship between choice and structure are encapsulated in the title of an article in *Training Industry Magazine* – Julie Winkle Giulioni and Karen Voloshin's article,

238 — Martin, Sun, and Westine, p. 11.

239 — Lee and Choi, p. 616.

240 — Lee and Choi, p. 616.

241 — Lee and Choi, p. 616.

242 — Shao, p. 1321.

243 — Lee and Choi, p. 612.

244 — Shao, pp. 1322-1325; Kebritchi, Lipschuetz, and Santiago, pp. 8-9; 11-14; Lee and Choi, p. 611-614

245 — Child et. al.

246 — Ibid.

247 — Learning and Work Institute, p. 9.

248 — Lee and Choi, p. 613.

249 — Ibid.

250 — Khan, p. 9.

251 — Hrastinski, 'A theory of online learning', p. 78; Donaldson, pp. 241-242; Strauß and Rummel, p. 252; Zhu et. al., p. 262; Gabaree et. al., pp. 656-657.

252 — Richard Allen Carter Jr. et. al., 'Self-regulated learning in online learning environments: strategies for remote learning', *Information and Learning Sciences*, 121 (2020), 321-329 (p. 323).

253 — Ibid, pp. 322-323.

254 — Ibid, pp. 323-326.

255 — Ibid, p. 325.

256 — Khan, p. 10; Hussein et. al., p. 6.

Learning design and facilitation

'Online, On-Demand, But Not On Their Own'

responds to the problem facing professional development where employees are increasingly asked to learn more in less time.²⁵⁷

Their recommendations provide valuable guidance on creating successful online training and they align with the academic literature.

They recommend three core principles for online instruction; **curate content** – making use of the best, highest quality materials, **create context** – ensuring that content is relevant for learners and focusing on the why as well as the what, and **cultivate connection** – incorporating human connection and guidance through the learning process.²⁵⁸

Instructors themselves can enhance their role in this latter aspect through generating insights by asking about learners' experiences, generating action by asking how learners will use their new knowledge and what is next, and setting an example by modelling behaviours like being vulnerable and openly sharing.²⁵⁹

Stephanie MacMahon, Jack Leggett, and Annemaree Carroll express how 'The shift to remote learning presents many challenges, particularly relating to student engagement, motivation, social connectedness, and feedback.'²⁶⁰

They note that self-regulated learning plays a critical role in learning but the shift to online has removed direct teacher and peer supports; this

257 — Julie Winkle Giulioni and Karen Voloshin, 'Online, On-Demand, But Not On Their Own', *Training Industry Magazine*, (2017), (https://www.nxtbook.com/nxtbooks/trainingindustry/tiq_20170708/index.php#/p/16) [accessed February 2022], pp. 16-19.

258 — Ibid, pp. 18-19.

259 — Ibid, p. 19.

260 — MacMahon, Leggett, and Carroll, p. 355.

social disconnect may hinder learning and harm the sense of belonging.²⁶¹

Alongside SRL, collaborative models of regulated learning are an emerging topic in the field and some models include Co-Regulated Learning (CoL) and Shared Regulation of Learning (SSRL).²⁶²

MacMahon, Leggett, and Carroll have developed 10 learning strategies aimed at K-12 learning settings, although these could ostensibly be adapted for older learners too.

Underpinning these strategies are effective learning principles of feedback, attention, dual coding (i.e. visual and verbal learning), retrieval practice, elaboration, and concrete examples.²⁶³

The strategies they present are designed to promote individual and group regulated learning processes and respond to these learning principles.²⁶⁴

Similarly, Paul Kirschner recommends enabling learners to assess their knowledge such as through recall strategies.²⁶⁵

Indeed, as well as a balanced approach to structure and self-directed learning, the literature also recommends inclusive, varied, engaging, and relevant content.

Content needs to be inclusive; Alex Kumi-Yeboah describes the importance of a cross-cultural collaborative learning framework and presents a framework for achieving cross-cultural

261 — Ibid, pp. 353-354.

262 — Ibid, pp. 354-355.

263 — Ibid, pp. 356-357.

264 — Ibid, p. 358.

265 — Reynolds and Chu, p. 234.

collaborative learning across planning, pedagogy, curriculum, technology, and interaction.²⁶⁶

This will help to ensure content is relevant for learners.

Kumi-Yeboah and Patriann Smith also describe the importance of not having a one-dimensional approach, supporting minority students, incorporating diversity into the curriculum, and multicultural presence.²⁶⁷

Furthermore, Nortvig, Petersen and Balle note the importance in blended learning courses of connections between online and campus-related activities and the importance of variation more broadly that emerges in the literature on course design.²⁶⁸

Courses cannot be directly transferred from face-to-face settings to online and careful redesign is required.²⁶⁹

At the same time, there are some overarching principles of good design regardless of the instruction medium.

Michelle D. Miller presented these as 'peer-to-peer interaction, active student engagement in learning, emphasis on practice and student effort, personalization to the individual student, variety, and emphasis on higher thought processes.'²⁷⁰

266 — Alex Kumi-Yeboah, 'Designing a Cross-Cultural Collaborative Online Learning Framework for Online Instructors', *Online Learning Journal*, 22 (2018), 181-201 (pp. 181-183; 193-195).

267 — Kumi-Yeboah and Smith, p. 19.

268 — Nortvig, Petersen and Balle, pp. 50-52.

269 — Kebritchi, Lipschuetz, and Santiago, p. 11; Shao, p. 1322

270 — Kebritchi, Lipschuetz, and Santiago, pp. 13-14.

Successful online learning will make use of OER, use various formats of content such as visual, active, virtual, games and videos, avoid text only content, and use social media.²⁷¹

Social media exposes learners to a wider range of learning experiences and materials thereby improving the learner experience.²⁷²

The use of E-guests has also been recommended as an effective strategy.²⁷³

Rebecca Chiyoko Itow recommends that just as with classrooms, 'make sure that course lessons offer access to the content through more vehicles than the written word. Use video, sound, art, and students' interests to contextualize learning.'²⁷⁴

Equally, using multimedia strategically and introducing technology early on is important – Kebritchi, Lipschuetz, and Santiago propose that educators ask themselves what the learning advantage will be from the inclusion of multimedia.²⁷⁵

Further still, content should be relevant to learners' experiences and interests.²⁷⁶

There is broad consensus that framing learning is important and at its simplest this concerns contextualising learning with 'problems, examples, cases, and illustrations.'²⁷⁷

271 — Shao, pp. 1323-1324; Kebritchi, Lipschuetz, and Santiago, pp. 12-13.

272 — Shao, p. 1323.

273 — Khan, p. 9.

274 — Rebecca Chiyoko Itow, 'Fostering valuable learning experiences by transforming current teaching practices: practical pedagogical approaches from online practitioners', *Information and Learning Sciences*, 121 (2020), 443-452 (p. 445).

275 — Kebritchi, Lipschuetz, and Santiago, p. 13.

276 — Lee and Choi, p. 611.

277 — Daniel T. Hickey, Grant T. Chartrand, and Christopher D. Andrews, 'Expansive Framing as Pragmatic Theory for Online and Hybrid Instructional Design', *Educational Technology Research and Development*, 68 (2020), 1-32 (p. 1).

Learning design and facilitation

Randi Engle's models of PDE and expansive framing are useful for understanding how this can be achieved.

PDE contains four principles: problematise content, give learners authority, hold learners accountable, and provide relevant resources.²⁷⁸

Hickey et. al. explain that 'from this perspective, engagement means that students are making substantive contributions to discussions, coordinating their contributions with others, attending to others, demonstrating passion or emotion, staying engaged for long periods, and spontaneously re-engaging'.²⁷⁹

Expansive framing, in contrast to expert framing, is about positioning learners as authors rather than consumers of knowledge.²⁸⁰

Expansive framing has three principles: encourage learners to make connections to other people, places, topics, and times; help learners hold themselves accountable; and position learners as authors not consumers in learning.²⁸¹

There is a debate in the field about how and when this framing should happen.²⁸²

Itow recommends framing first from an expert perspective before encouraging learners to understand and then challenge these perspectives.²⁸³

As a result of these models, learning becomes both productive (i.e. raising new questions and making new connections) and generative – that

is, able to be transferred and applied in new contexts.²⁸⁴

Hickey et. al. succinctly explain that 'While these theories are complex, the core idea is simple: If you want your students to later use the ideas they are learning ("transfer"), make sure your students discuss doing so while they are engaging with those ideas'.²⁸⁵

Itow explains how sharing power means that learners apply their knowledge, it removes the expert-consumer dynamic of online education, and it means that facilitators can focus on student needs and learning goals.²⁸⁶

Hickey, Grant T. Chartrand, and Christopher D. Andrews describe how most online learning is planned in advance and so there is a need to embed these principles in the design specifically for online learning.²⁸⁷

It should also be noted that **these principles are seemingly yet more relevant for employability programmes where the focus is on developing participants' skills, knowledge, networks, confidence and wellbeing.**

278 — Hickey et. al., p. 274.

279 — Ibid.

280 — Ibid, pp. 274-275.

281 — Hickey, Chartrand, and Andrews, p. 6.

282 — Kibid, pp. 2-6.

283 — Itow, p. 445.

284 — Hickey, Chartrand, and Andrews, p. 1.

285 — Hickey et. al., p. 274.

286 — Itow, p. 445.

287 — Hickey, Chartrand, and Andrews, p. 6.

"Our biggest learning has been the value and need to offer flexible approaches to learners in this age group.

Having a clear and easy-to-access set of resources including recorded sessions, copies of presentations and worksheets allowed participants to work through the content in their own time and return to materials when needed.

Supporting learning through pre- and post-session activities allows participants to arrive ready to learn in the live sessions and embed their learning after the session.

All of which was supported by access to an online message platform, Slack, where they could seek support from staff and peers any time, as needed."

Programmes Delivery Team

Provide opportunities for facilitator-learner interaction and provide timely feedback.

Effective facilitation, prominent facilitator presence, adequate facilitator-learner interaction, and timely feedback are critical aspects of online learning²⁸⁸

This can be achieved through regular active communication between learners and instructors which enables learners to feel connected to the instructor and to 'collapse the distance' in online learning.²⁸⁹

As noted above, research suggests that there is a fundamental role for instructors in scaffolding engagement practices and student interactions.²⁹⁰

For example, communicating expectations for asynchronous discussions, such as a minimum number of posts expected and how learners should communicate with one another.²⁹¹

This also feeds directly into the importance of learning as a social practice examined above.

An example of learning as a social practice is provided by Baum and McPherson in Harvard physicist Eric Mazur's use of 'clickers' where students use handheld devices to click to select an answer from multiple choices and discuss the question if a big divide occurs.²⁹²

Timely and effective feedback is routinely cited as good practice.²⁹³ MacMahon, Legget, and Carroll

288 — Farrell and Brunton, pp. 15-16; Lee and Choi, pp. 612-614, Muljana and Luo, pp. 27-29; Nortvig, Petersen and Balle, pp. 53-53; George, p. 46.

289 — Muljana and Luo, pp. 34-35; Nortvig, Petersen and Balle, p. 52.

290 — Nortvig, Petersen and Balle, p. 52; Kebritchi, Lipschuetz, and Santiago, pp. 14-16.

291 — Thompson and Copeland, p. 484.

292 — Baum and McPherson, p. 246.

293 — Quality Matters; Muljana and Luo, pp. 27; 35.

Learning design and facilitation

note that feedback is a particularly important learning principle for developing skills and refining knowledge.²⁹⁴

Kirschner recommends that facilitators 'Provide adequate feedback which retraces for students – the “why, how, and what” processes that led them to their final product.’²⁹⁵

In the Quality Matter's checklist for higher education, they recommend including timely feedback to enable learners to track their progress and improve, alongside acknowledging receipt of work and providing knowledge-check activities.²⁹⁶

The Edge Foundation's report on COVID-19's impact on education considers how to strengthen the learning assessment feedback loop since online often means that traditional means of gauging learners' responses are missing, such as immediate questions and interpreting body language. Their recommendations include peer feedback, reflective reports, and online quizzes.²⁹⁷

Hickey, Chartrand, and Andrews present the Participatory Learning and Assessment (PLA) framework as a 14-step guide for implementing feedback which may provide a useful template for online learning.²⁹⁸

PLA combines expansive framing and PDE with multi-level assessment. The principles underpinning it are insightful for understanding ways that expansive framing can feed into assessment and feedback on learning (and in turn

how engagement and participation fit into learning assessment).

For example, Hickey et. al. explain the ideas of grading learner reflections that are posted publicly on forums to encourage engagement and interaction but to let learners self-assess understanding privately using 'known answer' questions.

This protects the public discourse from 'known answer' questions which can undermine participation by causing learners to refrain from engaging if think they do not know the answer – and they note that this self-assessing also saves instructor time for engaging in forums.²⁹⁹

Indeed, these ideas resonate with the collaborative learning tools and social annotation approaches explored above.

Furthermore, individualised feedback and extensive educator presence can be difficult demands for facilitators that put added pressure on their time and resources.³⁰⁰

There are suggested ways to efficiently offer student-instructor interaction. For example, Bozkurt et. al. recommend recording short videos (5-7 minutes) with key ideas from the course and Nortvig, Petersen and Balle cited research showing the value of recorded videos, especially in asynchronous courses.³⁰¹

Anderson Pinheiro Cavalcantia et. al. have shown that automatic feedback is effective; for example, using a comparison with a desired answer is fairly

simple to implement.³⁰²

This means learners can attempt an exercise and immediately compare their work with an example provided in advance.

In summary, by ensuring that courses are effectively designed to include opportunities for self-directed learning that are at the same time scaffolded to ensure learners are supported, that content is engaging, relevant, and varied, and that there are good levels of facilitator interaction and feedback, participants will be in a position to successfully learn and engage in online programmes.

294 — MacMahon, Legget, and Carroll, pp. 356-357.

295 — Reynolds and Chu, p. 234.

296 — Quality Matters.

297 — Edge Foundation, p. 25.

298 — Hickey, Chartrand, and Andrews, pp. 1; 32.

299 — Ibid, pp. 9-10.

300 — Shao, p. 1323; Itow, p. 446.

301 — Nortvig, Petersen and Balle, p. 52.

302 — Anderson Pinheiro Cavalcantia et. al., 'Automatic feedback in online learning environments: A systematic literature review', *Computers and Education: Artificial Intelligence*, 2 (2021), 1-17 (p. 10).

Conclusion

This report has reviewed some key themes and recommendations in the online learning literature and relevant research to understand how to enhance engagement in online programmes for young people.

The central impression that emerges is that charities should:

1. Design inclusive digital environments and engaging flexible courses.

The literature often refers to the importance of learners having control and choices in their online learning experiences. Online programmes offer participants the ability to engage in ways that work for them and in this way their flexibility is their strength; personalised journeys, tailored support, and customised learning.

Therefore, two key challenges for charities that are running online programmes seem prominent.

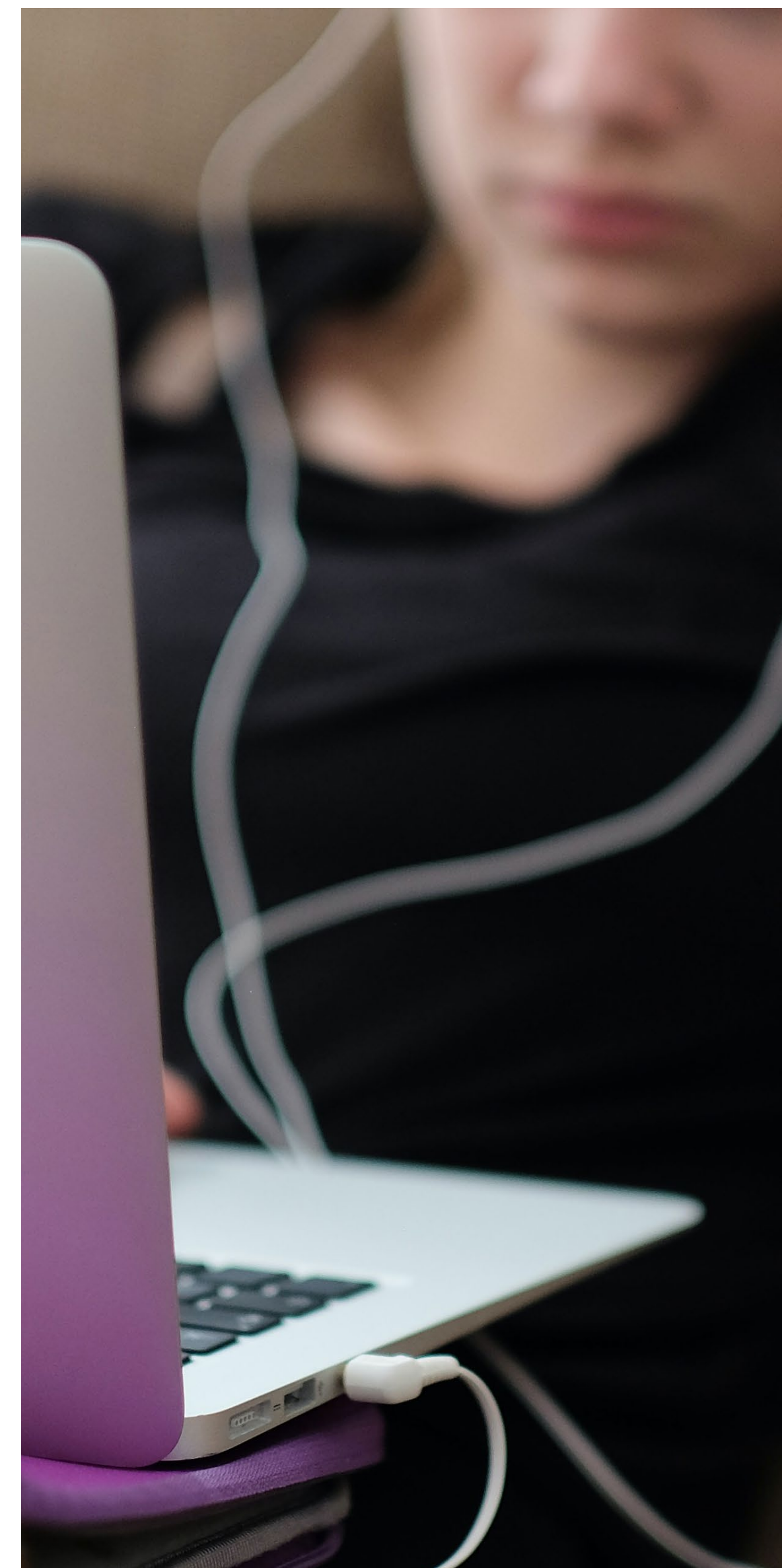
First, optimising the design of online learning to ensure that online programmes are inclusive and engaging, enabling young people to engage in ways that work for them.

Second, developing an informed understanding of online engagement so that it can be measured with an appropriate framework based on the context of online learning.

2. Prioritise young people's wellbeing.

3. Train, prepare, and support young people in and for online learning.

4. Cultivate a sense of community through peer to peer and facilitator interactions.



Our emerging learning and session design principles

In March of 2020 we took the decision to pivot our regionally based, face-to-face delivery to a combined national digitally delivered offering across all of its programmes (Leadership, Environmental Leadership and Employability) so that we could continue to meet the needs of young people during unprecedented times.

In light of that, this research is fascinating to read and reflect on, in terms of our own programme design, delivery and development journey over the past two years.

It speaks to the lessons that the UpRising programmes team have learnt organically through our experiences of online delivery, and our efforts to continue to develop our provision and programmes into blended and digitally enabled offerings that engage and develop young people during the pandemic and beyond as we emerge into a post-COVID environment.

Defining digital first

As we transition from the necessity of digital delivery, we have prioritised a 'digital first' approach to our programme delivery for the foreseeable future: we'll do those things face-to-face which evidence, our own data and experience show us cannot be achieved online.

We are also acutely aware of the challenges that digital delivery has posed for our programmes and are keen to explore the benefits that both digital and traditional delivery methods can offer to the organisation and the young people that we serve.

To support our understanding, we have consolidated our recent experiences into 'key lessons' and 'programme design principles' that will underpin our ongoing digital work and allow us to apply our knowledge of face-to-face delivery alongside digital learnings.

We will continue to explore the crucial engagement vs participation question that has emerged for us and many youth service providers within the sector.

Building community is critical

The key to building a successful cohort that feels like a community, which then in turn increases engagement and retention rates throughout the programme, is to embed community-building activities into the entirety of the programme process, from recruitment through to onboarding and then whilst on the programme. Over the past two years we have learnt that simple actions can support this endeavour such as: onboarding participants before the programme starts; allowing them a space to meet and 'talk' via the creation of a community hub and communication

channel such as Slack; and building in more group work into sessions and encouraging conversations in smaller group sizes. Asking "why we're all here" and recognising each other's "hopes and fears" for the programme and in their lives more generally, helps to build a sense that others are "just like me" and increases participants' sense of community and cohesion with fellow participants.

Building connection is essential

As well as building a community of participants, and just as important, is building a connection between the participant and the programmes team. Allocating them to a key 'point of contact' that is their constant throughout their time on the programme and making sure each participant receives a pastoral support call before the programme starts to build those bonds and sense of accountability from participants. Having a key point of contact for questions, support and wrap-around pastoral care is essential to building connections and encouraging individuals to sessions. These relationships are also valuable from a safeguarding perspective.

Online is flexible but participants may still need support

The flexibility of digital delivery and recording sessions to watch back later offers many benefits to young people who have competing priorities. However, it is necessary to create flexible spaces at regular intervals throughout the programme for participants to check in with the delivery team and receive more individualised support when needed.

Clarity of communication is key

Designing a co-ordinated and streamlined rhythm of communication with participants allows

them to feel secure with the online journey and gives them the knowledge of when to expect communication with their programme's delivery team. It allows them to plan how to fit their participation around their other commitments and encourages engagement and commitment.

Considerate programme design

Carefully thought-out and designed programme sessions are crucial to a positive programme experience for participants. Some of the tools, techniques and adaptations that we have considered include: reducing length of sessions; utilising 'warm up' and 'wake up' activities throughout the session; employing a session format that includes a variation of session facilitation tactics; including elements of blended learning that can take place pre, post or during the session; and having a flexible approach to delivery that takes into account the current mood of participants.

Repetition and recaps really make a difference

Repetition and recaps will help everyone to feel like they're on the same journey and consolidate participants' learning, both in sessions and during the programme journey. They help young people to understand outcomes and answer 'why is this session important to me?'. Holding space for reflections makes them feel engaged in the process and able to process key learnings along the way.

Tangible takeaways

Less is more. Repetition of practical steps, takeaways, and elements which can be implemented immediately helps to keep a digital audience engaged and understanding how they can apply their learning to their everyday lives.

Six design principles that UpRising apply when developing online programme content:

- 1. Coherent, relevant, up-to-date, and applicable content**
- 2. Participant-centred and inclusive programme design**
- 3. One that fosters a deep approach to learning**
- 4. One that encourages independence in and reflection on learning**
- 5. Based on active and collaborative learning that fosters learning relationships**
- 6. Continuous improvement based on feedback from participants and peers, evaluation, and review**

The above journey demonstrates the direction of travel that we're going in, not the destination. We believe that there is more to explore within the realm of digital delivery and are fully open to the fact that there are things that may still work better in person.

We are excited to continue to iterate our activities so that we can continue to offer quality, participant driven programmes at a time when the young people we serve need it the most.

Rukaiya Jeraj
Head of Programmes
July 2022

By the numbers: a year of digital delivery

By the numbers: a year of digital delivery

How many young people did we support digitally?

In 2021-2022, 771 individual young people joined our programmes, 672 of whom completed or are currently still on a programme.

Of those, we supported 450 young people through our employability programme Stand Out, 55 on 4 cohorts of our Leadership Programme (LP), 173 on 3 cohorts of Environmental Leadership Programme (ELP) and 55 young people through 7 pieces of commissioned work.

In 2021-2022, 771 individual young people joined our programmes, 672 of whom completed or are currently still on a programme.

Who did we support?

During the same period:

- **55%** of programme participants identified as Black, Asian, or minority ethnic (67% for Stand Out)
- **55%** were from the lowest two categories of the Social Mobility Commission's [measurement framework](#)
- **32%** of participants were eligible for free school meals when they were at school, compared to a national average of 21%.
- the average age of participants on our programme was 22.
- **72%** were female, 25% were male, 2% were non-binary, 1% preferred to self-describe, and 1% preferred not to say.
- **11%** of participants disclosed a disability.
- **18%** were LGBTQ+.
- **56%** identified themselves as belonging to a faith.
- **Over a third** of participants spoke a second language and participants spoke a combined total of 77 different languages.
- **1 in 4** of our participants joined from outside our core cities of Bedford, Birmingham, Cardiff, London and Manchester.

55% of participants were from the lowest two categories of the Social Mobility Commission's measurement framework.

55% of participants were from Black, Asian, or minority ethnic backgrounds (67% on Stand Out programme).

What else was going on for participants on our programmes?

We support young people aged 18 – 25 during what is for most a period of significant transition in their lives; lives that are often complex, varied and evolving:

- **80%** of participants had other working, studying, or volunteering commitments alongside their participation in our programmes. 31 (5%) participants have caring responsibilities.
- **31%** of participants on Stand Out said they were feeling anxious before the programme when asked on a scale of 0-10 'Overall, how anxious did you feel yesterday?' After the programme at the 3-month point, this had decreased to 17% of participants.
- **25%** (132) participants told us they had specific additional needs or requirements, including a lack of access to quiet/private space, difficulty accessing a digital device, and unreliable or no access to Wi-Fi or data.
- **1 in 10** (12%) planned to use their phone to access our programmes and 12 participants identified digital access challenges.

25% of participants told us they had specific additional needs or requirements.

What can we say about "engagement" ...so far

Across the programmes, participants attended live Zoom sessions or watched them on catch-up, discussed online resources in their programme Slack community, completed independent learning activities and weekly online reflections.

From this, we know that:

- 4 out of 5 of participants who joined a programme created a Slack account with 4 out of 5 engaging in online discussion in some form or another.
- 4 out of 5 participants attend live sessions during their programme. Others accessed content on our online learning platform at times that worked for them. On Stand Out, 190 unique users revisited content on our online learning platform.
- Over half of participants who finished a programme completed our in-depth pre-course and post-course surveys. We conduct these surveys to understand participants' skills, knowledge, networks, confidence, wellbeing, and education, employment, and training status, in line with UpRising's Theory of Change.
- Of the 672 who completed or are currently completing a programme with us, we know that 419 (62%) completed weekly reflections, attended live sessions and/or were actively engaged in the community.

Two thirds of those we supported during the year took part in Stand Out and from this we know that:

- 9 out of 10 of participants agreed or strongly agreed that the speaker engaged their interest during the session and that the session was pitched at the right level and pace.
- Our Net Promoter Score for Stand Out, asking participants whether they would recommend the programme to others. Is 36% "great" with 75% of respondents awarding the programme an 8, 9, or 10 in answer to the question "How likely are you to recommend Stand Out to others?"

Some of our outcomes ...so far

During the year, two thirds of those we supported took part in Stand Out. Externally evaluated impact outcomes for the programme at the 3m follow-up point are as follows:

Outcome measure	% reporting positive response before	% reporting positive response after	Percentage point increase in positive response
Tacit skills*	39%	73%	34
Professional networks*	44%	73%	29
Confidence*	53%	79%	26
Social networks*	55%	77%	22
Wellbeing*	41%	62%	21
Resilience during job search*	66%	79%	14
Competitiveness in labour market	18%	30%	12
Personal effectiveness	66%	75%	9
Participant perceptions of what they can achieve	74%	82%	8

*Denotes a statistically significant result

Bibliography

Bibliography

Aguilar, Stephen J., 'Guidelines and tools for promoting digital equity', *Information and Learning Sciences*, 121 (2020), 285-299

Akyeampong, Kwame et. al., 'Prioritizing learning during COVID-19: The most effective ways to keep children learning during and postpandemic', (Washington D.C., London, Florence: The World Bank, FCDO, and UNICEF Office of Research – Innocenti, 2022)

Aristovnik, Aleksander et. al., 'Impacts of the COVID-19 Pandemic on Life of Higher Education Students: A Global Perspective', *Sustainability*, 12 (2020), 1-34 (pp. 10-12)

Arnesen, Karen T. et. al., 'K-12 online learning journal articles: trends from two decades of scholarship', *Distance Education*, 40 (2019), 32-53

Baum, Sandy and Michael McPherson, 'The Human Factor: The Promise & Limits of Online Education', *Daedalus*, (2019), 235-254

Bozkurt, Aras et. al., 'A global outlook to the interruption of education due to COVID-19 Pandemic: Navigating in a time of uncertainty and crisis', *Asian Journal of Distance Education*, 15 (2020), 1-126

Career Communications Group, 'Education: Getting the most out of online learning', *US Black Engineer and Information Technology*, 44 (2020), 11-11

Carter, Richard Allen Jr. et. al., 'Self-regulated learning in online learning environments: strategies for remote learning', *Information and Learning Sciences*, 121 (2020), 321-329

Cavalcantia, Anderson Pinheiro et. al., 'Automatic feedback in online learning environments: A systematic literature review', *Computers and Education: Artificial Intelligence*, 2 (2021), 1-17

Child, Felipe et. al., 'Setting a new bar for online higher education', McKinsey & Company, (2021), (<https://www.mckinsey.com/industries/education/our-insights/setting-a-new-bar-for-online-higher-education>) [accessed February 2022]

Conrad, Dianne, 'Building and Maintaining Community in Cohort-Based Online Learning', *Journal of Distance Education*, 20 (2005), 1-20

Cunningham, Una, Kristy Beers Fägersten, and Elin Holmsten, "'Can you hear me, Hanoi?" Compensatory Mechanisms Employed in Synchronous Net-Based English Language Learning', *International Review of Research in Open and Distance Learning*, 11 (2010), 161-177

D'Mello, Sidney K., 'Improving student engagement in and with digital learning technologies', OECD

Digital Education Outlook 2021: Pushing the Frontiers with Artificial Intelligence, Blockchain, and Robots, (2021)

deepr, 'Framework for Human Connection' (https://www.deepr.cc/framework?utm_source=Catalyst&utm_campaign=f629615435-EMAIL_CAMPAIGN_5_5_2021_12_19_COPY_01&utm_medium=email&utm_term=0_7b925a1063-f629615435-416517482) [accessed February 2022]

Donaldson, Jonan Phillip, 'Building a digitally enhanced community of practice', *Information and Learning Sciences*, 121 (2020), 241-250

Farrell, Orna and James Brunton, 'A balancing act: a window into online student engagement experiences', *International Journal of Educational Technology in Higher Education*, 17 (2020), 1-19

Fidalgo, Patricia et. al., 'Students' perceptions on distance education: A multinational study', *International Journal of Educational Technology in Higher Education*, 17 (2020), 1-18

Flynn, Paul, 'DESIGN-ED: a pedagogical toolkit to support K-12 teachers' emergency transition to remote online education', *Information and Learning Sciences*, 121 (2020), 331-339

Gabaree, Lily et. al., 'Designing creative and connected online learning experiences', *Information and Learning Sciences*, 121 (2020), 655-663

George, Marcus L., 'Effective Teaching and Examination Strategies for Undergraduate Learning During COVID-19 School Restrictions', *Journal of Educational Technology Systems*, 49 (2020), 23-48

Giulioni, Julie Winkle and Karen Voloshin, 'Online, On-Demand, But Not On Their Own', *Training Industry Magazine*, (2017), (https://www.nxtbook.com/nxtbooks/trainingindustry/tiq_20170708/index.php#/p/16) [accessed February 2022]

Gourlay, Lesley, 'There Is No 'Virtual Learning': The Materiality of Digital Education', *Journal of New Approaches to Educational Research*, 10 (2021), 57-66

Hasan, Najmul and Yukun Bao, 'Impact of "e-Learning crack-up" perception on psychological distress among college students during COVID-19 pandemic: A mediating role of "fear of academic year loss"', *Children and Youth Services Review*, 118 (2020), 1-9

Hickey, Daniel et. al., 'gPortfolios: a pragmatic approach to online asynchronous assignments', *Information and Learning Sciences*, 121 (2020), 273-283

Hickey, Daniel T., Grant T. Chartrand, and Christopher D. Andrews, 'Expansive Framing as Pragmatic

Theory for Online and Hybrid Instructional Design', Educational Technology Research and Development, 68 (2020), 1-32

Holland, Alison Anderson, 'Effective principles of informal online learning design: A theory-building metasynthesis of qualitative research', Computers & Education, 128 (2019), 214-226

Hrastinski, Stefan, 'A theory of online learning as online participation', Computers & Education, 52 (2009), 78-82

Hrastinski, Stefan, 'What is online learner participation? A literature review', Computers & Education, 51 (2008), 1755-1765

Hung, Min-Ling et. al., 'Learner readiness for online learning: Scale development and student perceptions', Computers & Education, 55 (2010), 1080-1090

Hussein, Elham et. al. 'Exploring undergraduate students' attitudes towards emergency online learning during COVID-19: A case from the UAE', Children and Youth Services Review, 119 (2020), 1-7

Iivari, Netta, Sumita Sharma, and Leena Ventä-Olkkonen, 'Digital transformation of everyday life – How COVID-19 pandemic transformed the basic education of the young generation and why information management research should care?', International Journal of Information Management, 55 (2021), 1-6

Itow, Rebecca Chiyoko, 'Fostering valuable learning experiences by transforming current teaching practices: practical pedagogical approaches from online practitioners', Information and Learning Sciences, 121 (2020), 443-452

Jordan, Katy, 'Massive Open Online Course Completion Rates Revisited: Assessment, Length and Attrition', International Review of research in Open and Distributed Learning, 16 (2015), 341-358

Kaliisa, Rogers et. al., 'Social learning analytics in computer-supported collaborative learning environments: A systematic review of empirical studies', Computers and Education Open, 3 (2022), 1-11

Kapasias, Nanigopal et. al. (2020), 'Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India', Children and Youth Services Review, 116 (2020), 1-5

Ke, Fengfeng and Dean Kwak, 'Online learning across ethnicity and age: A study on learning interaction participation, perception, and learning satisfaction', Computers & Education, 61 (2013), 43-51

Kebritchi, Mansureh, Angie Lipschuetz, and Lilia Santiago, 'Issues and Challenges for Teaching Successful Online Courses in Higher Education: A Literature Review', Journal of Educational Technology Systems, 46 (2017), 4-29

Khan, Muzammal Ahmad, (2021), ' COVID-19's Impact on Higher Education: A Rapid Review of Early Reactive Literature', Education Sciences, 2-14

Kim, Young and Daradirek "Gee" Ekachai, 'Exploring the Effects of Different Online Syllabus Formats on Student Engagement and Course-Taking Intentions', College Teaching, 68 (2020), 176-186

Kumi-Yeboah, Alex and Patriann Smith, 'Relationships Between Minority Students Online Learning Experiences and Academic Performance', Online Learning, 20 (2016)

Kumi-Yeboah, Alex, 'Designing a Cross-Cultural Collaborative Online Learning Framework for Online Instructors', Online Learning Journal, 22 (2018), 181-201

Learning and Work Institute, 'The impact of moving employability training online: A review of EY Foundation programme delivery during lockdown', (Leicester, 2021)

Lee, Youngju and Jaeho Choi, 'A review of online course dropout research: implications for practice and future research', Educational Technology Research and Development, 59 (2011), 593-618

López-de-Ayala, María Cruz and Ricardo Vizcaíno-Laorga (2021), 'Participation of young people in online social communities: an exploration of attitudes among university students in a case study in Spain', KOME – An International Journal of Pure Communication Inquiry, (2021)

Lowes, Susan, Peiyi Lin, and Brian R.C. Kinghorn, 'Gender Differences in Online High School Courses', Online Learning, 20 (2016), pp. 102; 113-114

MacMahon, Stephanie, Jack Leggett, Annemaree Carroll, 'Promoting individual and group regulation through social connection: strategies for remote learning', Information and Learning Sciences, 121 (2021), 353-363

Maqableha, Mahmoud and Mohammad Aliab, 'Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India', Children and Youth Services Review, 128 (2021), 1-11

Martin, Florence, Lynn Ahlgrim-Delzell, and Kiran Budhrani, 'Systematic Review of Two Decades (1995 to 2014) of Research on Synchronous Online Learning', American Journal of Distance Education, 31 (2017), 3-19

Martin, Florence, Ting Sun, and Carl D. Westine, 'A systematic review of research on online teaching and learning from 2009 to 2018', *Computers & Education*, 159 (2020), 1-17

McIntyre, Nora, 'What does post-pandemic educational research tell us about online learning experiences?', *iSENDEi*, (2021), (<https://www.insendi.com/news-and-updates/what-does-post-pandemic-educational-research-tell-us-about-online-learning-experiences>) [accessed February 2022]

Means, Barbara et. al., 'Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies', US Department of Education (2009)

Meinck, Sabine, Julian Fraillon, Rolf Strietholt, eds., 'The impact of the COVID-19 pandemic on education: International evidence from the Responses to Educational Disruption Survey (REDS)', (2022)

Muljana, Pauline Salim and Tian Luo, 'Factors Contributing to Student Retention in Online Learning and Recommended Strategies for Improvement: A Systematic Literature Review', *Journal of Information Technology Education: Research*, 18 (2019), 19-57

Nieuwoudt, Johanna, 'Exploring online interaction and online learner participation in an online science subject through the lens of the interaction equivalence theorem', *Student Success*, 9 (2018), 53-62

Nortvig, Anne-Mette, Anne Kristine Petersen and Søren Hattesen Balle, 'A Literature Review of the Factors Influencing E-Learning and Blended Learning in Relation to Learning Outcome, Student Satisfaction and Engagement', *The Electronic Journal of e-Learning*, 16 (2019), 46-55

OECD and The World Bank, 'How Learning Continued during the COVID-19 Pandemic', (2022)

Panigrahi, Ritanjali, Praveen Ranjan Srivastava, and Dheeraj Sharma (2018), 'Online learning: Adoption, continuance, and learning outcome—A review of literature', *International Journal of Information Management*, 43 (2018), 1-4

Phirangee, Krystle and Alesia Malec, 'Othering in online learning: an examination of social presence, identity, and sense of community', *Distance Education*, 38 (2017), 160-172
Quality Matters, 'QM Emergency Remote Instruction Checklist for Higher Ed', (2020), (<https://docs.google.com/document/d/e/2PACX-1vRzSgvQZDAbugiG3Cxnq3D2hxiUZrzwVRj94MGPVDvY9exqxiSgOkuhKxkexPSxb12cb3QNqDTWSlc/pub>) [accessed February 2022]

Reynolds, Rebecca and Samuel K.W. Chu, 'Guest Editorial: Introduction to the special issue on emergency remote teaching (ERT) under COVID-19', *Information and Learning Sciences*, 121 (2020), 233-239

Rienties, Bart, et. al., 'Effective usage of learning analytics: what do practitioners want and where should distance learning institutions be going?', *Open Learning: The Journal of Open, Distance and e-Learning*, 35 (2020), 178-195

Roberson, Joe, 'Five ways charities have reduced digital exclusion through their services', *Catalyst*, (2021), (https://www.thecatalyst.org.uk/resource-articles/charities-digital-exclusion?utm_source=Catalyst&utm_campaign=80f5bb8e11-EMAIL_CAMPAIGN_5_5_2021_12_19_COPY_01&utm_medium=email&utm_term=0_7b925a1063-80f5bb8e11-416517482#) [accessed February 2022]

Rye, Ståle Angen and Anne Marie Støkken, 'The implications of the local context in global virtual education', *The International Review of Research in Open and Distributed Learning*, 13 (2021), 191-206

Shao, Congying, 'A Literature Review of Factors Related to Teaching that Influence the Quality of Online Education', 2021 2nd International Conference on Computers, Information Processing, and Advanced Education, (2021), 1321-1327

Singh, Vandana and Alexander Thurman, 'How Many Ways Can We Define Online Learning? A Systematic Literature Review of Definitions of Online Learning (1988-2018)', *American Journal of Distance Education*, 33 (2019), 289-306

Society of Learning Analytics Research (SoLAR), (<https://www.solaresearch.org/>) [accessed March 2022]

Strauß, Sebastian and Nikol Rummel, 'Promoting interaction in online distance education: designing, implementing and supporting collaborative learning', *Information and Learning Sciences*, 121 (2020), 251-260

Tabarrok, Alex, 'Why Online Education Works', *CATO UNBOUND: A Journal of Debate* (2012), (<https://www.cato-unbound.org/2012/11/12/alex-tabarrok/why-online-education-works/>) [accessed February 2022]

Tempelaar, Dirk, Quan Nguyen, and Bart Rienties, 'Learning Analytics and the Measurement of Learning Engagement', in Ifenthaler, Dirk and Gibson, David eds. *Adoption of Data Analytics in Higher Education Learning and Teaching*, (Springer, Cham, 2020)

The Careers and Enterprise Company, '2021: Trends in Careers Education', (2021)

The Edge Foundation, 'The Impact of Covid-19 on Education: Perspectives on the impact of lockdown', (2021)

Thompson, Kim M. and Clayton Copeland, 'Inclusive considerations for optimal online learning in times of disasters and crises', *Information and Learning Sciences*, 121 (2020), 481-486

Tsai, Yi-Shan, 'Learning Analytics in a Nutshell', *Society for Learning Analytics Research (SoLAR)*, (<https://www.solaresearch.org/about/what-is-learning-analytics/>) [accessed March 2020]

Youth Employment UK, 'Youth Voice: Census Report 2021' (2021)

Zhu, Xinran et. al., 'Reading and connecting: using social annotation in online classes', *Information and Learning Sciences*, 121 (2020), 261-271

Zoe Amar and The Skills Platform, 'Charity Digital Skills Report 2021', (Bristol, 2021)

Thank You

Thank you

We would like to say a huge thank you to everyone who was involved with or supported the production of this report, in particular to:

- **All of our funders** over the past two and a half years who have supported us to go beyond delivering “emergency remote provision” and instead to develop an impactful approach to digital teaching and learning on all of our programmes.
- **CAST Catalyst** and to **Erica Neve** and **Pedram Parasmand** for helping us start that journey, and introducing us to Agile project management.
- **YFF** for their support for Stand Out and prompting a conversation about online engagement; to **IFF Research** for providing insights on participant engagement and the impact of our work through Stand Out.
- **Jodie McNally** and the **EY Foundation** for sharing experiences of shifting online through their report *The impact of moving employability training online: A review of EY Foundation programme delivery during lockdown (October 2021)*.
- **Ben Beaumont** for editing and refining our text and **Steven Walker** at **OGRE Studio** for bringing the text to life in the design of this report.
- **Emma Dillon** and **Meghan Causer** for bringing a practical delivery perspective to the research and to everyone in the **UpRising Programmes team 2020 – 2022** for their energy and professionalism delivering during the pandemic.

Finally, a particular thank you to every single one of the young people who joined our programmes during lockdown.

