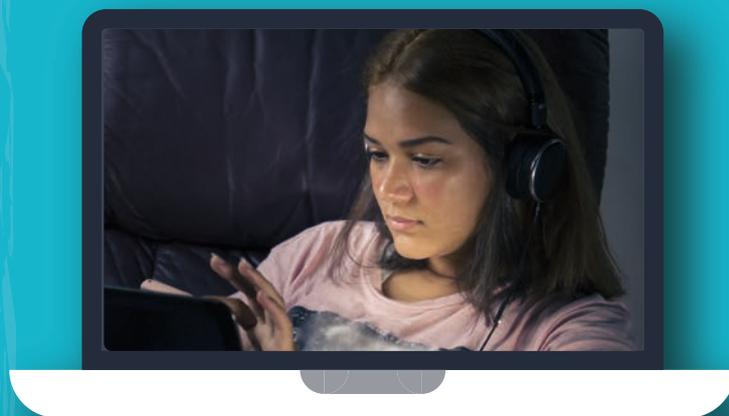
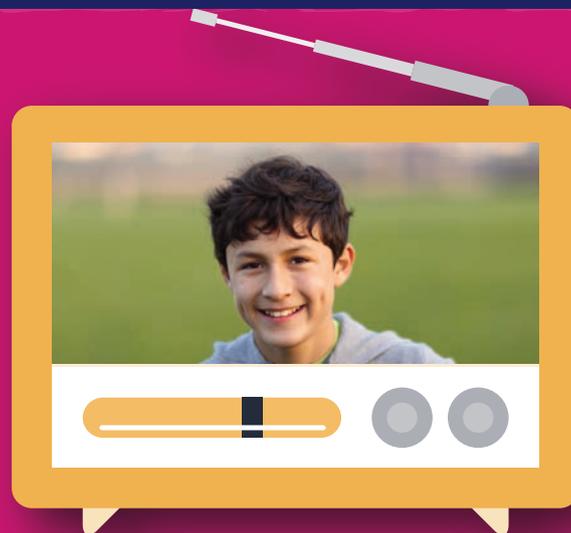


Education continuity during the Coronavirus crisis

United Kingdom: BBC Bitesize

Koen van Lieshout



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Type of intervention: governmental (autonomous public broadcaster)

Website: <https://www.bbc.co.uk/bitesize>

General description

BBC Bitesize is a learner-focused online study support platform that serves as a repository with materials specifically created for the individual education systems and grades represented in UK education. The initiative was started in 1998, and currently has materials available in both English, Welsh and Gaelic. The platform is tailored to the respective curricula of Wales, Northern Ireland, England and Scotland, covering 65 subjects in total. There is a complementary application for students aged 14-16 focusing on revision through flashcards (memory aids) to use on the go. The content on the website is available for free, although a TV license is needed to access the complementary shows in iPlayer and Red Button. Prior to the coronavirus crisis, BBC Bitesize did intentionally not provide “lessons”, given the platform’s purpose is not to teach the curriculum. In addition to these features, there is also *Bitesize Support* which features advice on various student life experiences, including moving to secondary school, jumping into the world of work, starting a new relationship or issues around mental health. *Bitesize Careers*, lastly, explains the world of work, with advice from people who have found the right path for them, by advising on what to study, on taking exams, or planning a career.

Since the covid-19 outbreak, coverage has been expanded to support the home education of students by providing daily lessons for 3-18 year starting 20 April. This is a completely new service, set up in response to the school closures. These daily lessons cover maths, English and science, and consist of videos, practice tests, educational games and articles. They represent a distinct shift from the platform’s normal content, and feature both BBC content and content from partners (e.g. educational publishers, cultural institutions). Outside these lessons,

The coronavirus crisis led schools and universities to rapidly transition to a distance-learning mode, via the Internet, television or radio. This series documents some country initiatives that ensured education continuity for all using technology and provided support to teachers, students, and their families.



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the Bitesize lesson plan varies week to week for each grade with weekly lessons posted on subjects including history, geography, music and art, as well as support guides for students with special educational needs. For parents, advice on supporting their children's education, study schedules and other tools for home learning are also posted. Though the platform does not cover the whole range of material provided to students through their schools' online learning portals, they complement the learning experience with lessons and materials on the website.

A Bitesize daily lesson for secondary school students on specialised cells (biology), for example, provides a summary of the different cells and their functions using bullets and bold fonts to highlight key points. The lesson includes a video on a sports therapist, detailing how they use this knowledge in practice. There is also an activity (matching the cell types to the image that represents them), and a quiz to test the knowledge covered. For younger students, the basics of the lesson are more frequently put in video format rather than text, where short clips (usually cartoons) help students understand e.g. how to use expanded noun phrases. Lessons are typically complemented by a video of a person using this in practice – for example a poet talking about onomatopoeia and alliteration in the case of the noun phrases lesson. There are also activities and a quiz to test knowledge.

Besides the weekly programme of videos, there are “teacher talks” videos (commissioned for iPlayer, but also available on the website) that support students struggling with some of the concepts introduced by teachers in the regular videos. These five-minute clips cover key concepts in each subject and are designed to help parents with some tricky questions they might be asked by their kids. There is also BBC4/iPlayer support for secondary school examinations (GCSE and A levels) with specific programming such as documentaries in science and history and Shakespeare plays performed by the Royal Shakespeare company.

Bitesize is a platform created by a reputable public media organisation, designed for students and their families. It provides supplementary learning resources aligned with curriculum content while also encompassing the overall school experience, being particularly mindful of ensuring representation of the diversity of the UK population. The covid response of the platform entailed expanding its focus on curriculum content and expanding the teaching aspect of its educational resources.

Main problems addressed

BBC Bitesize addresses a number of key issues around education continuity.

- **Access to online educational resources.** Since its inception, it has provided learning materials for students across the United Kingdom in the form of videos, practice tests, educational games and articles related to the UK curricula. With these materials, the platform can support distance education. Students can find multimodal learning resources, allowing them to find mediums or pedagogical approaches that work best for them. Students can delve deeper into materials at their learning pace, and “catch up” on particular subjects. The platform represents an opportunity for students who do not have easy access to other educational resources. BBC Bitesize helps reduce some of this gap by providing their online materials for free. Only for the supplementary shows on iPlayer and RedButton is a TV license required, which around 95% of UK households possess. The materials, including worksheets, are available on laptop, phone, and tablet to further increase accessibility of content.
- **Support for SEND students.** Moreover, the need for specific study support students with special educational needs and disabilities (SEND) has been an issue which was tried to address by providing resources for parents in supporting SEND students in the form of toolkits and information. Subtitles have made materials provided more accessible to students with hearing impairments, and to support dyslexic students video clips and animated content are used to illustrate points wherever this is possible.
- **Diversity and inclusion in educational materials.** Bitesize also works towards addressing limited diversity and inclusion in educational materials. Content is tested in different schools, and users with different abilities and demographics. There is particular attention paid to the inclusion of young people in content, and representation of Black, Asian, and minority ethnic (BAME) communities, LGBT+ individuals, people with special educational needs and disabilities, and of different

socioeconomic backgrounds, while reflecting the curriculum as it is taught. All of this is reflected in “Diversity and Inclusion Commissioning Guidelines” that need to be followed for all content featured on the platform.

Mobilising and developing resources

This platform has been a popular study support tool for a while, being used by 40% of primary school students and 80% of secondary school students in 2018. In particular, the materials preparing for the compulsory high school exams (GCSE) were well-developed, which is underlined by the particular popularity for secondary school coverage.

Yet, the expansion of the platform since Covid-19, in terms of the amount of materials, number of users, and duration and frequency of visits has been significant.

The provision of new materials has been ensured by:

- Expanding the team for editorial content
- Cooperating with partners, either by using their content (credited), or by developing the programme of study or author special projects. Such agreements are in place with a number of commercial (e.g. educational publishers, book publishers) and not-for-profit (e.g. museums, cultural institutions, sporting organisations) partners. This cooperation was unprecedented, as a number of such partners could be considered competitors to the platform.
- Support from teachers and other education stakeholders to help. The platform has worked with a large number of specialist education or teacher content authors for a number of years, and has used a lot of them to author content and write scripts. Some of the many teachers who have offered to work with Bitesize have been used to deliver Teacher Talks.
- Making the systems robust enough to handle increased traffic including very high peak usage numbers. Given the growth in traffic and in the platform itself, there has been a lot of upgrading of systems, and building the networks to help users navigate the expanded space.
- Asking celebrities to present elements of lessons and people with experience in different careers, disciplines and learning styles to share their stories with students. For example, Sergio Aguero, the Manchester City striker, shows learners how to count to 12 in Spanish, and David Attenborough – natural history presenter - has presented geography lessons for BBC Bitesize Daily Lessons. Overall, the recognisability of the platform has been a key factor in gathering these resources.

Fostering effective use and learning

The platform has developed a number of approaches to increase student engagement:

- **Multimodal access, brevity and diversity of materials.** The multimodal access to materials allow students to find the mode most suited to their devices, learning needs and their study time. There are videos, practice tests, educational games and articles on the website that allow for diverse learning activities. They are generally quite short. In addition to materials online there is an application, materials on iPlayer and Red Button, and the BBC Bitesize Daily TV show. The Instagram account features social quizzes, interactive and peer led content and weekly teacher Q&As. Moreover, BBC Four will devote a block of programming each weekday evening to shows that support upper-secondary curriculums including broadcast versions of various Shakespeare plays; reruns of classic drama adaptations; and science and nature documentaries.
- **Diversity of teachers.** Teachers are diverse and also include celebrities, experts, and “everyday people” sharing their experiences.
- **Engaging and age-appropriate resources.** The resources themselves try to be both engaging to students (e.g. with use of videos) and designed with a good understanding of learning science.

The amount of and complexity of the reading for different lessons and tasks are tied into the grade-level of students, for example. The platform makes use of the “learn – practise – activity” format, and frequently employs interactive games at the primary level, and (smart) quizzes to check understanding of the content. The materials are also thoroughly tested to ensure they are well-suited to, and well-received by their target audience. The platform tracks attainment and engagement of students on the platform, with particular attention to “target segments” of students for whom this is particularly prudent (e.g. students with disadvantaged backgrounds). This way it can adapt strategies or materials where needed.

- **Visibility.** Materials can be easily found and referred to by teachers, as the platform is comprehensive and well-known by students and parents. Teachers can easily refer to materials suiting the content covered that week in class, both complementing the learning they seek to foster and making it easier to tailor to students’ learning interests. However, student progress on the platform cannot be saved, and teachers cannot provide feedback.
- **Supporting parents.** Parental toolkits and guides are provided to support the learning of SEND students, help organise the school day, and focusing on other academic and non-academic areas, such as mental health.

Implementation challenges

Besides the general difficulty of changing the purpose of the platform, and expanding it to allow for daily content, there are a number of practical implementation challenges that were experienced during this process.

Firstly, the restrictions have posed challenges for the broadcast team that could not film as usual. The team had to adapt most of the “regular” processes, including their use of the studio and green screens (backdrops in Chroma key photography, which is a process that replaces a solid-coloured background from behind the subject of a photo (or video) with a new background) in the filming process.

Enabling access for hearing-impaired and visually-impaired students has been a challenge, especially due to an increasing reliance on worksheets. There are continued and strengthened efforts towards facilitating access for special educational needs and disabilities (SEND) students to as many resources as possible, but given the (much) quicker turnaround to publication of resources, this poses a continued challenge for the platform.

There was also a particular challenge around managing resources. The expansion of the resources meant that it is increasingly difficult to maintain the same quality of production, and that there is additional strain on ensuring the content is well-suited and well-received by the target audience. Moreover, the navigation of the different parties involved and all the requests to help and for help posed particular challenges to a team already facing a peak demand. Increasing the network size and content volume has also put additional strain on the engineering and design teams.

Managing trust, in particular, has been a challenge in this. There are a number of parties for whom this trust is crucial:

- The change in the role of Bitesize can be perceived as stepping on the toes of *teachers*. It has always been a study support resource and has not been involved in teaching the curriculum, so it has been key to ensure that teachers’ concerns are mitigated. BBC Teach, the sister site of Bitesize has provided support and resources for teachers throughout (www.bbc.co.uk/teach).
- Moreover, *private sector partners*, particularly those considered competitors, have shown significant trust towards Bitesize by providing their resources free of charge on the platform. Ensuring these parties continue to be involved with and content with this arrangement is key.
- Similar management is required for *parents*, who now increasingly rely on this platform.
- The *government*, to some extent is also part of this list, given that the platform’s current role stretches beyond what it is normally expected to do, and there might be concerns over the

preservation of market competition. It is important to note that Bitesize has put mitigating steps in place to avoid competition issues. They operate under partnership agreements with a number of commercial (e.g. educational publishers, book publishers) and not-for-profit (e.g. museums, cultural institutions, sporting organisations) partners to ensure the market is not distorted, and clear agreements are in place around credit given to partners and the limits of the use of their content.

There were also some linguistic challenges. Bitesize's pre-Covid resources are available in Gaelic and Welsh in addition to English. However, providing all or most of the new material in those languages is, due to the limited time to do so and increased volume of material a significant challenge. The daily lessons created during the crisis have not been provided in Gaelic, whereas the Welsh team has put significant additional effort towards providing (some of) this content in Welsh for the students.

Monitoring success

Bitesize monitors a number of measures for success:

- Reach of the platform, time spent on it, and frequency of use are key indicators. Most of these indicators have shown significant increases, but whether the continued usage will be maintained during the crisis is a question that is closely examined.
- The audience reach team focuses on teachers and parents, and uses qualitative and quantitative surveys that generate ratings for specific elements or for the whole platform, and gets feedback on how they can be improved.
- There is monitoring of social media and email feedback, and there is a survey on the website as well through which comments or suggestions can be provided.

The platform was already popular before covid-19, and has the ability to improve and differentiate learning support. It could particularly be valuable to students for whom non-traditional learning styles work better, students with special educational needs and disabilities (SEND), and students who do not normally have access to (paid) learning support. Moreover, the solution is, beyond the initial investment, relatively cost-effective over time, given that materials can be used over multiple years. This, in part, is a product of being a BBC-led initiative, as a public broadcaster already possesses much of the infrastructure that makes the cost for producing the materials more marginal than it would be otherwise.

Adaptability to new contexts

The BBC Bitesize model should be scalable to international contexts, although the development period might stretch beyond the lockdown periods. Supporting learning through a free online platform that allow students to complement learning done at school seems valuable for personalisation and equity, both in socio-economic terms, for SEND students, and by providing platforms for role-models to students with minority backgrounds. Yet, on the whole, at this point Bitesize is a platform with strong specificities: it is well-established and pre-existed the Covid-19 outbreak, with already significant usage, and is run by the public broadcasting service. In this sense, it seems that an initiative at this scale is hard to replicate during the crisis. Moreover, as discussed before, the wide coverage implies that it is at or very nearly at scale already in the United Kingdom.

Importantly, the way in which Bitesize is utilised now will not be sustained, given that for-profit companies are providing materials for free, and that – as schools will reopen – the daily lessons will be outside of the scope of the platform again. However, there could be a role for the platform in its expanded format during a potentially prolonged need for virtual or blended learning into the next academic year. Moreover it could serve as a model through its ability to reach underprivileged students, and play a role in increasing diversity and integration. The “Teacher Talks” and “Bitesize Careers & Support” also allow for visibility of different perspectives, might help popularise particular careers, or the choice for particular careers by certain target groups of students, and so forth.

Key points to keep in mind for a successful adaptation

1. Involve teachers, education consultants, and other experts to develop daily lessons and other educational resources (e.g. the Teacher Talks) tailored to support online teaching of the (national) curriculum, preferably in different forms (videos, games, etc.). It is important to engage enough people to ensure coverage across all courses, school-age groups, regular lessons and extra-curricular matters.
2. Involve the national broadcast service in the development of the resource given they have the ability to reach national coverage easily across different mediums, and are a trusted source of information to most citizens. You could consider giving them the lead over resource curation and/or coordination, or could choose another institution – know-how of pedagogy and education policy is key.
3. Develop a platform that can support large-scale engagement, and a good design so that resources are easy to find for families and teachers.
4. Resources need to be provided with subtitles and sufficient audio-visual content to ensure accessibility for students with special education needs and disabilities (SEND).
5. Ensure that low income students can access the resources by providing free access to the platform and devote part of the efforts to providing them with technology infrastructure and devices needed to use the content.
6. Propose daily schedules and regular content that balances key subjects with the rest of the curriculum, as well as varying mediums of communication and platforms to host content on. Moreover, it is key to supply tips on how to use the resources and be productive during learning time while in lockdown.
7. Support parents with guides and toolkits to support learning, both to structure the “school day”, to support students with special educational needs and disabilities (SEND), and to guide non-academic aspects relevant to the wellbeing and learning process of their children.
8. Engage celebrities and public figures in the initiative: make them work with teachers and present content in engaging ways, and match them along their strengths to support learning for each respective subject.

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