



EDUCATIONAL GUIDE CLASSROOM OF THE FUTURE



ONVU
LEARNING

WWW.ONVULEARNING.COM

INTRODUCTION

ONVU Learning is the education division of ONVU Technologies group. With over 20 years of education, video and technology experience, ONVU Learning is focused on improving teacher coaching, development and satisfaction, and ultimately student outcomes.

Partnering with schools, governments and education advisors around the world, we are determined to design, refine and align multiple technologies to play an important part in defining the learning environments of the future.

PARTNER SCHOOLS

Read our success stories of how schools around the world are using ONVU Learning's lesson observation and teacher reflection tools to improve their teaching standards and student outcomes.



[VIEW ALL CASE STUDIES →](#)

EDUCATIONAL GUIDE

CLASSROOM OF THE FUTURE

It's safe to say that the Covid 19 pandemic has changed the world of education.

There's a growing realisation among educational experts that schools will be different for some time to come.

In this guide, we're looking at the challenges and opportunities this new change presents, imagining what the 'classroom of the future' could look like.

DISCOVER OUR EDUCATIONAL GUIDES→



WE'LL COVER:

- 04** **PART 1:** The future of teacher training and development
- 08** **PART 2:** 6 ways in which learning will change in the classroom of the future
- 10** **PART 3:** 5 Changes to the curriculum in the classroom of the future
- 13** **PART 4:** new learning experiences in the classroom of the future
- 15** **PART 5:** 6 practical changes needed for the classroom of the future
- 17** Lesson observation with ONVU Learning



PART 1

THE FUTURE OF TEACHER TRAINING AND DEVELOPMENT



THERE ARE REAL ISSUES AROUND INITIAL TEACHER TRAINING ([THIS ARTICLE FROM SCHOOLS WEEK](#) POINTS OUT THAT MANY SCHOOLS WILL NOT BE EASILY ABLE TO HOST TRAINEES) AS WELL AS ONGOING TEACHER TRAINING. WILL NEW SKILLS BE NEEDED IN THE 'NEW NORMAL'? LOOKING FIRST AT INITIAL TEACHER TRAINING, WE'VE TALKED TO SOME OF OUR PARTNER SCHOOLS THAT HAVE 360-DEGREE VIDEO CAPTURE IN MANY OR ALL OF THEIR CLASSROOMS AND REFLECTED ON THEIR AND OUR EXPERIENCE. THIS IS WHAT WE THINK TEACHER TRAINING COULD LOOK LIKE.



1. REMOTE VISITING BEFORE A PLACEMENT STARTS

A student teacher is assigned their school. But rather than visiting the school, they are given access to video footage of the actual classes they are teaching. They can see the routines that the school and the teacher use to ensure focused learning, and they can start to see where the students are in their learning journey. Once they have had a chance to look at some lessons, they can have a video conference call with their university tutor, the mentor they will be working with

at school and perhaps the classroom teacher. They can discuss specific aspects of the lesson and then use specific parts of the lesson to complete written assignments.

2. FOCUSED TIME AT SCHOOL

Once they arrive at school, better-informed teachers can come into the classroom as an expert and trusted assistant teacher, rather than having to sit at the back of the classroom for a while as most trainee teachers do and run the risk of distracting the students! During this time, they could perhaps teach a specific part of a lesson or practice introducing a new concept.





3. MORE SUPPORT FOR REMOTE STUDENTS

One reason why schools were reluctant to take on trainees according to Schools Week was the need to 'catch up' students who have missed work, but trainee teachers could also help by offering small-group remote support using the technology that schools have been relying on in recent months. This would also allow them to see the impact of their teaching and to see the misconceptions that students often introduce.

4. MORE REFLECTION IN MORE PLACES WITH MORE PEOPLE

Student teachers can reflect on lessons and discuss them with mentors remotely if they are recorded, reducing the number of people they come into contact with. They can also select and share video clips and with the right permission obtained, share them with peers for discussion or use them to build up their own 'Teacher Standards' portfolio.



Our [case study on Nathan Price](#), a NQT teacher from The Hereford Academy in the UK, shows how remote mentoring worked well in his first year of teaching.



***WATCH** our videos from the UCET National Conference 2019 to see how even before COVID 19, the importance of mentoring was being emphasized by education experts Sam Twiselton (OBE Prof. of Education, SHU) and James Noble-Rogers.*





ONGOING TEACHER TRAINING

AND WHAT ABOUT TEACHERS ALREADY WORKING IN A SCHOOL? HOW MIGHT THEIR TRAINING CHANGE?

1. DEVELOPMENT IN NEW SPECIALIST ROLES

There is already an interesting debate in many schools about the different roles that teachers are taking on in response to remote working. Some are finding that they enjoy creating online content and others that they are good at providing remote academic and pastoral support, while many just want to get back to classroom teaching!

Schools and trusts are reflecting on this and thinking about helping those in different areas – for example some teachers might be given time and training to create presentations, video and audio content that students can use for remote learning, either alongside lessons in school in a future lockdown situation. Or more simply, they might deliver the key content of a subject to a

whole year group by video link, with other teachers then supporting smaller groups in applying these new ideas.

2. FOCUSED AND REMOTE CPD

The teacher teacher training day in the UK, with dozens or hundreds of teachers coming together in one room, may be one of the last features of a school to return to normal (along with whole school assemblies), with teachers staying in smaller groups.

This presents a challenge to schools who rely on this type of training. But there is an alternative. Many schools are already providing updates on statutory issues through online courses – and this provides an easy central record to refer to for inspections.

This frees up teachers to spend more time working in department or phase groups on specific development issues, bringing in expert help from inside or outside the school where needed.



PART 2

6 WAYS IN WHICH LEARNING WILL CHANGE

THIS SECOND PART DISCUSSES THE LEARNING ISSUES THAT WILL ARISE AS A RESULT OF THE RECENT DISRUPTIONS TO SCHOOLS. HOW CAN STUDENTS ACCESS LEARNING IN A BLENDED WAY IF WORKING BETWEEN SCHOOL AND HOME? HERE ARE OUR THOUGHTS ON THE CHANGES THAT ARE LIKELY, AND HOW TECHNOLOGY WILL BE ABLE TO HELP!

1. WORK WILL HAVE TO FOLLOW THE STUDENT

A huge change is that students may be going to school for several days in a week and then completing work at home, either as a whole year group or as part of that group. The result is that lessons may start at school and finish at home (or vice versa), with students needing to use technology to keep up to date and work through tasks. Schools will need to be highly organised with effective learning management systems.

2. THERE WILL BE NEW WAYS OF COLLABORATING AND RECORDING WORK

Will exercise books and files become relics of the past as Government guidance is that they should not be taken away by teachers to be marked? Online workbooks, which can be shared between students for project work, may

be the answer. Marking could even be outsourced and returned the next day, in the same way that national external exams are marked onscreen by workers in different time zones.

3. STUDENTS AND TEACHERS WILL HAVE TO USE TECHNOLOGY BETTER

All of the above changes mean that both students and teachers will need to be better at using educational technology. And while many in both groups have made great strides while in lockdown, there are still widely varying skill levels. Schools will need to invest in a series of IT lessons focused on new technologies. And as we discussed in our last article, teacher training will have to include modules on distance and remote learning.

4. STUDENTS WILL FIND NEW WAYS TO ASK FOR HELP

Once new ideas have been presented, students have to use and apply them and that's when teachers see mistakes and offer help in classrooms. If social distancing is to be maintained this might have to be replaced with regular low-stakes online quizzes and online submission of examples of work. On the downside, such access to technology will probably mean students contacting teachers outside school hours and a delay in getting feedback.



5. COURSES, NOT LESSONS, WILL BE TAUGHT

With students not synchronized with each other, and perhaps some learning over school holidays through 'catch-up' schemes the concept of individual lessons will mean less, and students will need to adapt to longer sequences of tasks. This could have a positive impact in that students would be aware of their overall learning goals over time, rather than just 'getting through' each lesson.

6. CONTENT WILL COME FROM A WIDER RANGE OF AREAS

An opportunity that many schools have been exploring in lockdown is to reduce the burden on teachers by bringing together content from a range of sources. These will include the classroom teachers, but perhaps also a subject expert in the school, external commercial content, or new, free material from the likes of Oak National or BBC Bitesize. The challenge for the school is not going to be accessing material but curating it into a coherent structure that children can follow.

READ MORE FROM OUR PARTNER SCHOOLS

Read more from our partner schools on how they have used ONVU Learning for lesson observation and teacher self-reflection, to improve their teaching standards and have an impact on student outcomes.



Visit our website and read how our partnerst are using ONVU Learning



C
A
S
E

S
T
U
D
I
E
S



PART 3

5 CHANGES TO THE CURRICULUM





IN THIS SECTION WE LOOK AT THE OPPORTUNITIES TO DEVELOP A NEW AND ENGAGING CURRICULUM AND THE CHALLENGES IT COULD FACE WHEN STUDENTS ARE WORKING REMOTELY.

1. GREATER CHOICE AND DIVERSITY

Some students and parents have been managing their school work while trying new and interesting areas – whether that be [Eton X](#) courses in communication and critical thinking, [FutureLearn Schools' tasters of higher education](#) or cloud computing courses offered by Amazon Web Services and others. The latest virtual learning environments allow greater integration of ideas from around the world. Will this challenge what has been considered a restricted curriculum especially around the years that contain assessments and external exams?

2. SOME TOPICS FOR HOME AND OTHER TOPICS FOR SCHOOL

[In this article](#), Zoe Enser argues coherently that some ideas will be more difficult to explain and explore remotely, while others may lend themselves to extended home-based project work. That means that schools might have to plan in much more detail or perhaps collaborate with others to share the burden, creating new roles for teachers who are skilled in these areas. Whether this leads to the start of a part-time school movement is another question!

3. REMOTE ASSESSMENT TO SAVE CLASSROOM TIME

Following on from the previous point, classroom time may be too valuable for lengthy assessments. However, many teachers have found while working remotely that low stakes digital tests



(Microsoft Forms quizzes, Kahoot! Sessions) can be as useful and provide more immediate data than a written test. While it might seem that this lends itself more to subjects such as Maths, the work of [No More Marking](#) and others on comparative judgement techniques mean that there is growing potential for similar time savings in longer written work.

4. FOCUSED AND SLIMMED-DOWN NATIONAL CURRICULUMS

Over recent years there has been a clear trend in adding more content at all stages of learning in many countries, including England. Covering all this material was a challenge without the demands of remote working and many are concerned that 2021 exams will be difficult to conduct fairly, due to lack of teaching time ([this article suggests](#) they might be 'open book' while others have suggested [GCSEs should be abolished](#)). Will the next iteration of National Curriculum, GCSEs

and A-levels focus on less content with more opportunity to practice?

5. A DIFFERENT APPROACH TO INSPECTION?

The last OFSTED framework had a strong focus on curriculum, welcomed by many schools and teachers. The '3Is' – intent, implementation and impact – have been the bedrock of many schools' responses and inspectors have pioneered 'deep dives' into subjects on inspection visits. It has already been suggested that [inspections should be postponed until 2021](#) and this might be needed to prepare inspectors to focus on the areas above, exploring how schools ensure and validate learning in a new remote environment. Inspectors may for example need to sample online learning and get the views of remote learners. A library of video lessons could be a great asset for schools in this situation.

E
X
T
R
A

R
E
S
O
U
R
C
E
S

THE SCHOOL OF THE FUTURE GUIDE

The School of the Future Guide is aimed at helping school leaders and teachers make informed choices when designing the learning environments of the future using existing and upcoming technologies, as they seek to prepare children for the rest of the 21st century – the result is a more efficient and competitive school.



EDUCATIONAL GUIDE
THE SCHOOL OF THE FUTURE



ONVU
LEARNING

WWW.ONVULEARNING.COM

DISCOVER THE GUIDE →



PART 4

NEW LEARNING EXPERIENCES



THIS SESSION IS ABOUT THE OPPORTUNITIES TO GO BEYOND THE CLASSROOM, TO TRANSPORT STUDENTS AND TEACHERS AROUND THE WORLD AND EXPERIENCE THE BEST THERE IS TO LEARN... REFLECTING ON THE INITIATIVES THAT MANY STUDENTS AND PARENTS HAVE TAKEN DURING LOCKDOWN. THESE COULD BE DONE AS CLASS ACTIVITIES OR SHARED THROUGH THE NEW VIRTUAL LEARNING ENVIRONMENTS ALL SCHOOLS AND STUDENTS ARE USING.

1. VR AND AUGMENTED REALITY AT SCHOOL OR HOME!

More and more schools have been booking [virtual and augmented reality](#) experiences in school through companies such as ClassVR. These new learning experiences can happen in school, but could we see them happening at home as well, with students using simple tools like [Google Cardboard?](#)

2. GLOBAL MICRO-QUALIFICATIONS

[This prescient article](#) shares headteacher Mark Steed's views that formal academic qualifications will only be part of what students need to succeed in a global marketplace – and taking short courses from anywhere in the world will make you stand out! Mark shares his experience of taking an 'Elements of AI' course from the University of Helsinki!

3. STRONGER LOCAL COMMUNITY CONNECTIONS

Many of the initiatives started in lockdown were actually based in local or school communities, deepening the work that all schools will do in their communities. These include befriending and volunteering schemes, [lockdown gardening](#) and many more!



4. SCHOOL AND TRUST SPECIALISMS

With the move towards more centralised curriculum provision outlined in the previous part of this guide, there is more opportunity for individual schools and trusts to develop their own expertise to meet local needs or reflect their teachers' expertise. Ormiston Academies Trust wrote about their journey in [this article in Schools Week](#).

5. REAL-LIFE PRACTICAL EXPERIENCE

School laboratories and technology rooms are often full of old-fashioned equipment and the skills taught are equally out of date (do real research scientists use Bunsen burners for example?). [Companies such as GSK](#) and organisations such as the Royal Society of Chemistry have created [innovative virtual practicals](#). There's even a [project that brings labs to schools](#). And in IT why not take on a Raspberry Pi project and produce something real?

6. VIRTUAL EXPERIENCES

[Here are some exciting ideas](#) where students are taken on experiential activities including going on a safari, becoming a marine biologist, and going into space - all done in the virtual world, of course!



7. REMOTE EXPLORATION

[This article](#) highlights ten overseas links that bring the world into the classroom involving local experts in many of them. Take a virtual tour of these sites:

- Machu Picchu, Peru
- Christ the Redeemer, Rio de Janeiro
- Pyramids of Giza, Egypt
- Eiffel Tower, Paris
- Angkor Wat, Cambodia
- Taj Mahal, India
- Stonehenge, UK
- Petra, Jordan
- Colosseum, Rome
- Chichen Itza, Mexico



PART 5

6 CHANGES NEEDED FOR THE CLASSROOM OF THE FUTURE

HAVING LOOKED AT THE CURRICULUM, LESSON CONTENT AND INITIAL TEACHER TRAINING, THIS FINAL SECTION LOOKS AT THE PRACTICAL ISSUES AROUND IMPLEMENTING THESE CHANGES. WHAT WILL NEED TO BE DIFFERENT IN CLASSROOMS, AND WHAT CHANGES WILL NEED TO BE MADE TO SCHOOL POLICIES AND SCHOOL CULTURE TO ENSURE THEY SUCCEED?

TECHNICAL CHANGES

1. INTEGRATING REMOTE AND LOCAL STUDENTS

It may well be that lessons in the future will have to involve some children in school and others at home or in other classroom 'bubbles'. Adding more video screens in the classroom for the teacher to see remote learners will allow them to involve both groups at the same time.

It will also be less easy for teachers to give feedback in traditional ways – walking around the room and talking to individuals. Many teachers have recommended the use of visualisers to show work – this could be extended by enabling all children to photograph and

submit work. And app-based voting tools that work both in the classroom and remotely will allow immediate feedback in response to teacher questions, wherever the student is learning.

2. FLEXIBLE CLASSROOM DESIGN

We've seen throughout these articles that classrooms will fulfil different roles in the future – studios for recording lessons, lecture theatres for whole year groups, traditional teaching rooms or breakout areas for IT or project work. In a new-build school rooms could be built with [flexible partitions or moving walls](#), while existing schools can use soundproofed partitions.

3. IMPROVED, HIGH QUALITY VIDEO AND AUDIO CONNECTIONS

Many of the ideas suggested in previous blogs require high quality video and audio links with the outside world. Most classrooms now have projectors and speakers to bring the world to the classroom but are less good at capturing full-class video and high-quality audio. Our [solution](#) is highly suited to this application – designed by teachers to make it easy to record whole lessons and then zoom in to specific parts of the classroom if needed.



4. ONLINE STORAGE AND INTEGRATION WITH OTHER SYSTEMS

Schools have been incredibly innovative in lockdown periods, using software such as Google Classrooms and Microsoft Teams for communication and sharing work in the short term. Schools can now think about the longer term – storing video and written lesson content for the future and linking these communication systems to assessment, markbook and parental communication systems. This will make it much easier to deal with future lockdowns or partial closures as work can be retrieved and teachers used to support students rather than rapidly creating content.

WIDER SCHOOL ISSUES

1. DATA PROTECTION

Moving to a system where vastly more

information is shared inside and outside of schools requires a different level of consent from students and their parents. We've worked with many schools to help them meet the needs of the General Data Protection Regulations (GDPR) in the UK - [this blog](#) discusses our findings.

2. A NEW LEARNING CULTURE

The 'new normal' is less formal and relies on individual teachers taking more responsibility for their students. But this is also an opportunity to switch to a different way of working. Schools that put more emphasis on sharing and collective learning will do much better than those who rely on traditional 'command and control' ways of working – how can you micromanage pupils' books when they're not in school? Read our further [thoughts on micromanagement here](#).

LESSON OBSERVATION WITH ONVU LEARNING

Let's round off the series by looking at how ONVU Learning is uniquely suited to delivering innovative teacher training programmes for your school.

Our solution is simple: using a 360-degree camera, a high definition microphone it records the entire view of a classroom. The recordings are safely stored in the gateway box or in the cloud and are only accessible by or with the permission of the teacher. Our discreet always-on system is entirely focused on helping teachers review all aspects of a lesson.

[ONVU Learning] has given AUEA staff the capacity to develop their teaching and reflection skills, and the confidence to personalise the learning for the individual.

**DAVID CHAPMAN,
VICE-PRINCIPAL
ASTON UNIVERSITY
ENGINEERING ACADEMY**



1**NO DISTRACTING SET-UP ISSUES**

There's no need to set up the system in the classroom at the start of a lesson. ONVU Learning is already set up and always on, so you can always 'go back in time' and take a look at key incidents without planning ahead the recording every time.

3**A VIEW OF THE FULL CLASSROOM**

ONVU Learning uses the latest 360-degree video technology, giving a complete view of a classroom. That allows teachers to zoom in to see how students are responding to tasks, listen to their responses to questioning and even view up to four parts of the room at the same time.

5**EASY CLOUD-BASED SHARING**

Footage can be stored in the local gateway or in the cloud and can also be shared (with the permission of the teacher) with external experts, for example our specialist coaches, SEN experts in other parts of a MAT or university-based ITT mentors.



VISIT our website to discover more about the benefits of the ONVU Learning solution and how it can help your school!

2**NO 'HAWTHORNE EFFECT'**

Traditional lesson observation with a 'person watching at the back' influences the classroom dynamics. With ONVU Learning, observations can be reviewed by multiple observers (with the teacher's permission) at the same time and wherever convenient.

4**TEACHER CONTROL**

In all ONVU Learning schools, teachers control access to their footage (except in the case of a serious safeguarding issue). This changes the culture of the school – senior leaders have told us of staff keen to share successes as well as asking for help with specific issues.





ONVU LEARNING

WWW.ONVULEARNING.COM

[CONTACT US](#)

©Copyright 2021 ONVU Technologies AG. All rights reserved. ONVU Learning is a trading name of ONVU Technologies AG. Specifications and configurations subject to change without notice. "ONVU", the "circles device" are trade marks, and in some cases pending, registered or protected trade marks, of ONVU Learning Limited, including variously under registration or protection in the UK and India.

(Version 1.0 - June 2021)

