

RAPID ONLINE LEARNING REVIEW: INITIAL DISCUSSION PAPER

Introduction

Scottish Government undertook a rapid review of the online learning landscape in Scotland's schools, to provide stronger strategic direction for the e-learning landscape in Scotland, recognising the range of existing offerings, the funding landscape, and the opportunities that online delivery presents to teachers and learners.

The scope of this work was to review, evaluate, and make recommendations on the current and future landscape of the online learning provision in Scotland, ensuring equity, quality, and alignment with national priorities and consideration of funding models.

While there are links to wider work on the future of the Glow platform, the digital learning vision/strategy, AI etc, these elements were not directly within the scope of the online learning review and are subject to separate consideration.

Background

Online learning offers a powerful complement to traditional in-person education - not as a replacement, but as an expansion of access, enabling more personalised and flexible learning experiences, and supporting a diverse range of learners through a multi-modal means of delivery.

While the social, emotional, and collaborative benefits of face-to-face teaching are irreplaceable, online learning offers distinct options that can enhance overall educational equity and learner autonomy.

The use of online learning has increased following the periods of remote learning during the COVID-19 pandemic leading to a wide range of new online learning, teaching and assessment tools and resources.

Challenges are recognised around equity of digital infrastructure and provision, online safety and security, digital literacy of teachers and learners, and localised support, among other factors.

It was identified that work was needed to understand the quality and effectiveness of the various offers currently available to learners in Scotland's schools – including variation in approach, platforms and funding models.

Given the timescales under which the review was being undertaken, it was necessarily high level although efforts were made to draw inputs and views from a wide range of stakeholders and available research/data.

Engagement Undertaken

Engagement has taken place with a range of stakeholders as set out at Annex A.

A Short-Life Working Group was set up to gather views from key education delivery partners, with separate meetings also held with online education providers and wider stakeholders, to understand the opportunities and challenges relating to online learning.

A limited range of evidence and information was also reviewed in the timescales available to support considerations.

What is meant by online learning?

For the purposes of the rapid review, a broad definition of online learning has been adopted.

A mode of education where teaching and learning occur primarily through digital platforms and internet-based technologies, allowing learners to access educational content, often live in real-time or through scheduled sessions interacting with teachers and peers, or through recorded or static resources.

However, the views and considerations relating to the different types of online learning differ and further work is anticipated to focus in on specific aspects and undertake more detailed consideration of those. In particular, challenges around live online delivery of learning and teaching have been identified as requiring further exploration.

Rationale for online learning

Various international and Scottish policy documents highlight the importance of digital and online learning to young people's education.

As part of [General Comment No. 25 on children's rights in relation to the digital environment](#), which was published in 2021 as part of the United Nations Convention on the Rights of the Child, there is reference to remote learning under section XI A (Education, leisure and cultural activities: Right to Education):

102. For children who are not physically present in school or for those who live in remote areas or in disadvantaged or vulnerable situations, digital educational technologies can enable distance or mobile learning. States parties should ensure that there is proper infrastructure in place to enable access for all children to the basic utilities necessary for distance learning, including access to devices, electricity, connectivity, educational materials and professional support. They should also ensure that schools have sufficient resources to provide parents and caregivers with guidance on remote learning at home and that digital education products and services do not create or exacerbate inequities in children's access to in-person education services.

Outcome 7 of the National Improvement Framework aims to deliver "An education system engaging in digital technologies to enhance all aspects of learning and teaching, supported by a digitally skilled workforce and tackling digital inequality."

In addition, a national online learning offer is critical to support resilience of the system and complement local provision as a contingency measure in the event of any future emergency school closures - as happened during Covid. Maintaining this offer more generally at this time ensures that materials are kept up to date and that teachers are appropriately experienced to deliver digitally in such events.

Stakeholder Views on Online Learning

Through discussions with partners, a range of views have been expressed in relation to the opportunities and challenges that online learning can offer, with COSLA and ADES generally supportive. Indeed many local authorities have their own online learning provision.

However, it is acknowledged that others, including the teaching unions, oppose the online delivery of learning and teaching.

Particular concerns have been raised by the teaching unions around:

- the quality and successfulness of online delivery of learning and teaching compared to in-person delivery
- legal articles relating to effective education and ASN and teacher regulations to discharge these duties
- SNCT requirements and teacher terms and conditions
- GTCS professional standards – particularly in relation to safeguarding and meeting GIRFEC duties
- class sizes
- online delivery being seen as a cost-cutting exercise.

We are keen to engage further on concerns raised around online delivery of learning and teaching to understand how these could be resolved .

As the Cabinet Secretary announced in September, the initial priorities for the Centre for Teaching Excellence will be in the following areas.

- Inclusive and diverse classrooms (includes additional support needs, behaviour, inclusion and well-being)
- Innovation in pedagogy and practice (includes subject knowledge, assessment, tracking and attainment)
- Digital education and Artificial Intelligence

These focus areas align well with some of the key considerations in this space and may support thinking going forward

While some evidence of young people views was gathered from recent user research and young people engagement (see Annex B), this demonstrated mixed views in relation to a varied experience of quality of online learning balanced against greater accessibility for some young people.

In March 2025, the Children and Young People’s Commissioner Scotland published a report summarising what children and young people had told them about education in Scotland, and what needed to improve in response. The report can be accessed

at: ["This is our lives, it matters a lot." Putting children's rights at the heart of education - The Children and Young People's Commissioner Scotland](#)

As part of the recommendations, the report stated that "*Scottish Government should invest in the e-Sgoil and other virtual school models to maximise access for children and young people to a wider range of curriculum subjects and to increase access for children who benefit from their alternative education provision.*"

From a parental perspective, Connect's survey of parents and carers on digital and online devices and new technologies, published in June 2024, received over 600 responses from 31 local authorities, and covered parents of children and young people from early years through to S6. The survey report can be accessed at: [Connect: Digital and Online Learning Survey Report](#)

The following key findings and calls for change in relation to online learning were included:

- With the exception of BBC Bitesize, most respondents did not know about the online learning opportunities in Scotland.
- Much more needs to be done so all parents are aware of the online learning opportunities in Scotland (e-Sgoil, Scholar, West OS).
- The majority of respondents (67%) want to see digital resources and services as a key priority for education – parents need to be kept in the loop about policy and progress at national and local level.
- Parental confidence in IT and emerging technologies needs to be boosted – delivering training in using technology is an ideal family learning opportunity.
- Most schools (61%) do provide information about internet safety for children and for parents. However, this needs to be delivered consistently across Scotland. Schools are perfectly positioned to be gateways and hubs for knowledge and learning for families about our digital lives.

High level discussions also took place with college and university representatives who are generally positive about the use of online learning, with many offering online learning options, from full degree programs to short courses, allowing flexible study around existing commitments. Many in-person courses also contain an element of remote online learning, with some colleges providing online courses for school pupils through school-college partnerships.

It is suggested that further user research should be undertaken to understand stakeholder views more fully, particularly those of young people, and where they would see the priorities to be in future.

Opportunities and Challenges Related to Online Learning

While online learning may deliver efficiencies or cost savings, it should not be seen as a cost-cutting substitute for in-person education, but as a strategic enhancement that increases access, supports diverse learners, and enables more flexible, responsive, and inclusive education systems. When thoughtfully integrated, online and in-person learning can mutually reinforce each other - offering learners more

choice, more support, and more opportunities to succeed, and preparing them for next steps to further education, higher education or employment.

While in-person face-to-face teaching and learning continues to have primacy and offers strong benefits relating to social engagement and immediate interaction and feedback, evidence consistently shows that well-designed and well-delivered online courses can equally achieve successful learning outcomes compared to traditional classroom settings.

For example, South-West Connects is entering its fifth year of delivering senior phase classes. Over this time all secondary schools within the 4 local authorities (Dumfries & Galloway, East Ayrshire, North Ayrshire and South Ayrshire) have engaged. A total of 499 young people have been presented for SQA exams through studying with @SWC and those participating are generally achieving pass rates equivalent to the national position.

	Cohort	@SWC A-C	@SWC A-D
2024/5	129	74%	87%
2023/4	108	70%	88%
2022/3	151	74%	84%
2021/2	111	74%	84%

However, it is recognised that there are also a range of challenges in relation to online learning, including online safety and security, wellbeing and inclusivity, support for young people, equity of digital infrastructure and provision, quality of online pedagogy and resources etc.

While the opportunities and challenges will vary based on the type of online learning and the individual learner, online resources and learning can enable students to progress at their own pace, revisit challenging concepts, and explore areas of interest more deeply. This level of personalisation is difficult to achieve in a traditional classroom setting alone.

While some learners thrive in online settings, others may struggle with motivation or feel isolated. This highlights the importance of considering individual needs and ensuring that young people are appropriately engaged and supported – whether through in-person, online or a combination of both.

More detail on the opportunities and challenges around online learning can be found at Annex C and D respectively.

Existing Provision and Future Priorities

The current online learning landscape in Scotland comprises of a range of national, local and commercial provision. This further consists of a mix of live, recorded and static resources covering both the Broad General Education (BGE) and support for the Senior Phase/National Qualifications.

Each of these offers expand on the opportunities available to young people in schools across a range of areas:

- Additional, high-quality resources for teachers to use in their classrooms or as additional reading/homework – whether across the BGE or the Senior Phase.
- Study support for young people working towards their school qualifications.
- Provision of online delivery of learning and teaching for interrupted learners who are at risk of disengaging from their in-person education.
- Delivery of online learning, teaching and assessment of a range of qualifications.

Mapping of Existing Provision is provided at Annex E.

Online providers have also been keen to engage in discussions, and a joint meeting was held bringing them together.

Discussions have shown that there is a demand for online provision across the areas identified above, with particularly increasing demand from interrupted or home educated learners, or young people in school or recently left seeking to undertake qualifications they could not otherwise access.

Further work is needed to understand what demand for online learning will look like over coming years, particularly the need for any adaptation of existing or new content on online learning platforms to reflect work through the Curriculum Improvement Cycle (CIC) and qualifications reform.

Next Steps and Actions

Discussions have identified that there are a wide range of online offers currently available, with a range of different types and considerations, and strong teaching union views in relation to online delivery of learning and teaching.

Partners are agreed that a national policy on online learning would be helpful but, in the timescales for the review, sufficient collaborative discussion has not been possible. As such, a range of further proposed research and actions have been identified in this space.

Further research gathering:

- Undertake more focused engagement and user research to:
 - identify young people's views and needs (to expand on what is currently available through references in CYPC report, NDA User Research etc).
 - understand current offers and future needs in more detail - particularly in relation to live online delivery of learning and teaching - in the context of Curriculum Improvement and qualifications reform work and options for the replacement of Glow.
 - further review of approaches taken elsewhere in relation to live online delivery of learning and teaching and any outputs from other relevant workstreams such as the Centre for Teaching Excellence Hubs on Digital and ASN.

Short- to Medium-term Actions

- Convene a Group or Forum to facilitate discussion on future priorities for the National e-Learning Offer, National Digital Academy, and online learning, to:

- explore varying considerations about different types of online learning, particularly live online delivery of learning and teaching, in more detail and which groups of learners may benefit most.
- identify where existing local offers could be shared nationally as part of the National e-Learning Offer [considering practicalities/logistics].
- explore future funding options and quality assurance mechanisms to allow informed, confident decision making on choices across available offers.
- develop guidance on good practice for effective/successful online delivery of learning and teaching, including clear roles and responsibilities within the education system .
- help prepare for the dissemination of any new curriculum and qualifications resources arising from reform work.

Medium- to Longer-term Actions

- Initiate and facilitate regular online provider forums.

Scottish Government will consider a workplan for the various actions identified, including potential timescales under which the different elements may be undertaken. Consideration will also be given to what stage formal completion of an Equality Impact Assessment and Child Rights and Wellbeing Impact Assessment may be appropriate

National Qualifications Policy Team
Scottish Government
December 2025

Stakeholder Engagement

Short-Life Working Group

A Short-Life Working Group of key education delivery partners was convened to gather views and explore options around the current and future landscape of the online learning provision in Scotland's schools. This comprised of:

Education Scotland
COSLA
ADES
SLS
EIS
NASUWT
SSTA
AHDS

Other Inputs

Other inputs were sought from online providers and wider stakeholders, including a review of any background information and data sources.

Online providers engaged:

e-Sgoil
SCHOLAR
Scottish Online Lessons
Scottish Highers Online
RGC Online (Robert Gordon College)
FIDA (Dollar Academy)
Education Academy Scotland
Hashtag Learning/Achieve
YASS
SCIS

Wider Stakeholders:

CONNECT
Open University
Aberdeen University
Colleges Scotland

Background Information and Data Sources:

OECD: [Policy Survey on School Education in the Digital Age](#)

OECD surveyed **37 jurisdictions (Jan 2025)** on digital education in schools.

- Digital education is a **top policy priority**, often with strategies, funding, and timelines—but **weak monitoring**.
 - **AI** mentioned in policies, but **few detailed plans**.
 - Schools encouraged to align with national goals; **teacher training and support widespread**, though often **voluntary**.
 - Curricula include **digital skills**, but **interactive elements and formal assessments rare**.
 - Governance relies on **guidelines**, not binding rules; **data protection covered**, enforcement varies.
 - **Funding and procurement differ**; collaboration common.
 - **Device access promoted**, but **equity gaps remain**.
 - Monitoring focuses on **digital skills**, not broader outcomes.
 - Overall: **Progress made**, but need for **equity, effectiveness, sustainability**.
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EU: [Digital Education Action Plan: policy background - European Education Area](#)

The Digital Education Action Plan (2021-2027) lays out a strategic vision and 14 actions to foster quality and inclusive digital learning in response to COVID-19 and future-proof Europe's education systems.

Priority 1: Fostering a High-Performing Digital Education Ecosystem

These actions aim to strengthen digital infrastructure, content, and governance across EU education systems:

- **Structured Dialogue**: Facilitate high-level exchange between the Commission and Member States on common digital education challenges and enabling factors
- **Blended Learning Approaches**: Promote inclusive, high-quality primary and secondary schooling through blended learning methods
- **European Digital Education Content Framework**: Develop standards for educational content (interactive, accessible, safe)
- **Connectivity & Digital Equipment**: Ensure schools have access to high-speed internet and appropriate devices
- **Digital Transformation Plans**: Provide resources, guidance, and support for schools to create and implement their own digital strategy
- **Ethical Guidelines on AI**: Offer practical guidance to teachers on using AI and data ethically in education

Priority 2: Enhancing Digital Skills & Competences

These actions focus on boosting digital literacy and skills through frameworks, certification, and targeted programmes:

- **Guidelines to Foster Digital Literacy & Combat Disinformation**: Support educators with guidance to build critical digital literacy skills
- **Hands-On Guidance for Teachers**: Provide practical advice to primary/secondary teachers on implementing digital and AI tools
- **Update European Digital Competence Framework**: Revise DigComp to better include AI and data skills
- **Digital Skills Certificate**: Work toward an EU-wide certificate validating digital competency

- **Measuring Student Digital Skills:** Establish approaches for assessing and benchmarking digital competences in students
- **Digital Opportunity Traineeships:** Facilitate ICT-focused traineeships to boost young professionals' digital experience
- **Women in STEM:** Encourage young women to develop entrepreneurial and digital competencies
- **European Digital Education Hub:** Operate a collaborative online community for practitioners and stakeholders

Wales: [Hwb strategic overview - Hwb](#)

Welsh government vision for digital transformation:

- **Vision:** Innovation-led transformation supporting Curriculum for Wales and modern learning environments.
- **Leadership:** National collaboration and strategic partnerships for procurement and governance.
- **Infrastructure:** High-speed connectivity, seamless access, and evolving technical standards.
- **Services:** Consistent bilingual resources, shared services for efficiency, and anytime-anywhere access.
- **Safety:** National digital resilience plan, safeguarding guidance, and cyber security support.

England: [Free, time-saving teacher resources | Oak National Academy](#)

Independent public body, working in partnership with teachers in England to improve pupil outcomes and close the disadvantage gap by supporting teachers to teach, and enabling pupils to access, a high-quality curriculum online.

UK Parliament: [Screen time: impacts on education and wellbeing - Education Committee](#)

House of Commons Committee report, with recommendations to UK government.

- **Screen time rising sharply;** early smartphone use common.
- **Mixed effects:** some educational/social benefits, but major risks (pornography, bullying, mental health, sleep disruption).
- **Learning impact:** non-academic use harms focus and memory.
- **Recommendations:**
 - Limit screen time for young children; balance for older ones.
 - Enforce mobile phone bans in schools.
 - Provide parental guidance and teacher training on digital literacy.
 - Set quality standards for educational apps.
 - Implement Online Safety Act quickly; strengthen age checks.
 - Assess risks of edtech and AI; ensure updates and safe disposal.

Education Scotland: [Younger Children's Screen Time. – DigiLearn](#)

Education Scotland web page sharing a variety of recommend reading links around screen time for younger children.

The following studies related to university study but suggest that online delivery of courses can deliver equally successful outcomes when designed well:

Stanford and World Bank Studies (2023–2024)

- A **2023 World Bank report** found that students in online courses performed **on par or better** than those in traditional classrooms, particularly in **STEM and business subjects**.
 - A **2024 Stanford study** showed that students in **well-designed online courses retained 25% more information** than those in traditional lectures, highlighting the importance of instructional design and learner engagement. [\[opencollege.ac\]](https://opencollege.ac)
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Meta-Analysis: Online vs In-Person Learning

- A **2024 meta-analysis** published in *Open Mind (MIT Press)* examined 211 effect sizes from 30 studies and found **no significant difference** in learning outcomes between online and in-person formats. The small difference in effect size ($d = -0.05$) was statistically insignificant, suggesting that **online learning can be just as effective** when well implemented. [\[direct.mit.edu\]](https://direct.mit.edu)
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Comparative Studies in Higher Education

- A study at **King Saud University** compared student performance across five core courses taught in-person (2020) and online (2021). After adjusting for variables like gender and class size, **three courses showed better performance online**, one favoured in-person, and one showed no difference. This underscores the **contextual nature** of effectiveness and the role of course design. [\[nature.com\]](https://nature.com)
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Public Administration Course Study

- A study comparing online and in-person sections of a graduate research methods course found **no significant difference in student performance**. Interestingly, **online students reported higher levels of participation and interaction**, suggesting that digital environments can foster engagement when designed thoughtfully. [\[jstor.org\]](https://jstor.org)
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Broader Literature Reviews

- Reviews from sources like the **California Learning Resource Network** and **Open College** emphasize that **pedagogical design and technological infrastructure** are the key determinants of quality—not the delivery mode itself. Poorly designed online courses underperform, but **interactive, adaptive, and well-supported online environments** can outperform traditional classrooms. [\[clrn.org\]](https://clrn.org), [\[opencollege.ac\]](https://opencollege.ac)
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Young People Views

NDA User Research – June 2024

Education Scotland undertook a User Research survey when considering options for the National Digital Academy manifesto commitment. 2,215 Learners responded to a survey, with a specific interrupted learners questionnaire (14 learners), and a further 54 participants through interviews and focus groups

Key findings from the user research are as follows:

- The majority of learners (80% of survey respondents) are already taking advantage of online resources to support them with their studies.
- 41% of all respondents reported wanting to take a course that was not available to them, with this want increasing with each year group (S3-S6).
- 21% of respondents were studying subjects delivered outside their school's standard offering (this percentage was significantly higher at S6: 36%).
- Some learners valued the flexibility of online options and expressed excitement about organising their own workload. However, many learners were concerned about the level of self-motivation and independent learning skills required for online learning, particularly the self-study option.
- Senior phase learners are better placed than learners at earlier stages of their education to adjust to online learning environments.
- Many learners will likely initially prefer purely in-school offerings, but a majority see a benefit in adding one or another version of online learning.
- Experience with online study resources is statistically associated with a decrease in a preference for purely in-school versions.
- The findings emphasise the need to maintain human connection via practical academic support as well as emotional support and this is most apparent for Additional Support Need (ASN) learners, who rely on the support for learning assistance.
- Online learning gives teachers who require flexibility an opportunity to stay with the profession in a way that suits them.
- The percentages of respondents being interested in studying for the following qualifications were;
 - National Qualifications not run at their school (49%), National Progression Awards (NPAs) or NPA units at SCQF Level 4, 5 and 6 (31%) and, short courses to support learning in specific aspects of National Qualifications (20%).
- The top 10 subjects respondents most frequently expressed an interest in studying but were not able to were;
 - Psychology (19%), Sociology (13%), Italian (11%), Philosophy (10%), Childcare and Development (10%), Engineering Science (10%), English (9%), Biology (8%), German (8%) and, Fashion and Textile Technology (8%).

Other Feedback

Recent Children and Young People Engagement as part of work on education reform has included the following feedback.

Scottish Youth Parliament report feedback on digital learning (18 MSYPs):

It was a mixed response from participants as to the benefits of online learning compared to in-person learning and whether they were as good as each other. Those who agreed that online learning is just as good as in person felt that they could spend more time focused on learning and studying rather than travelling, getting ready or rushing to attend somewhere in-person (particularly when it came to university). They did suggest that the quality of online learning was very contingent on the teacher and/or lesson facilitator but felt that generally online learning was a more accessible option for a wide range of young people – and could include those who did not or would not attend school in person.

Alternatively, those who did not agree focused primarily on the lack of 1-2-1 feedback as online learning was mostly – if not always – conducted in large group calls and there was very little chance for a student to speak directly and privately to their teacher, if they had questions or needed specific help.

They felt that during Covid-19 their online learning was a hinderance to education and they regressed hugely, especially for those in primary school as the online methods were not adapted well to primary school/early years learning

Young Scot report summary of feedback on digital learning (seven young people aged between 13 and 17 years old):

The Panel felt that there were a lot of positives linked to digital learning and that it is something that does have a place in classrooms in the future. They discussed that it is something that would need to be regulated so that information gained is gathered from trusted sources. They said that it can be less social, meaning that the mental health of young people could be impacted negatively if overused. They also highlighted that there can be a stigma around its use to support young people with additional support needs such as dyslexia and that this is something that would need to be addressed. It was acknowledged that everyone has different needs and that there are benefits to both low-fi and digital learning, highlighting that there should be a balanced approach to how they are used.

Opportunities related to Online Learning

Flexibility and Accessibility

While in-person face-to-face teaching and learning continues to have primacy and offers strong benefits relating to social engagement and immediate interaction and feedback, evidence consistently shows that well-designed and well-delivered online courses can equally achieve successful learning outcomes compared to traditional classroom settings.

It is acknowledged that face-to-face education is particularly effective for:

- Collaborative group work
- Practical or lab-based learning
- Building relationships and social-emotional skills

The flexibility offered by online learning does not diminish the value of in-person learning—it broadens the reach of education to those who might otherwise be excluded.

Online learning removes geographical and temporal barriers, allowing learners to access high-quality education regardless of location, mobility, or personal circumstances. This is particularly valuable for students in rural or under-served areas, learners with disabilities, health conditions or additional support requirements, or those that are at risk of disengaging from their in-person learning.

Personalised Learning Pathways

Online resources can enable students to progress at their own pace, revisit challenging concepts, and explore areas of interest more deeply. This level of personalisation is difficult to achieve in a traditional classroom setting alone.

While some learners thrive in online settings, others may struggle with motivation or feel isolated. This highlights the importance of considering individual needs and ensuring that young people are appropriately engaged and supported – whether through in-person, online or a combination of both - offering flexibility and access through online tools, while maintaining the relational and motivational benefits of in-person interaction.

Autonomy and Digital Literacy

Online environments can encourage learners to take greater ownership of their learning. They must manage their time, navigate digital platforms, and engage in self-directed study - skills that are increasingly essential in both higher education and the workplace. This fosters independent learning habits that are sometimes less emphasised in structured classroom settings.

Diverse Modes of Engagement

Online tools and resources, whether used in an in-person classroom or as part of wider online learning, support multi-modal learning - videos, simulations, interactive quizzes, discussion boards, and real-time collaboration tools. These can cater to different learning styles and foster engagement in ways that complement in-person instruction.

For learners with disabilities, caregiving responsibilities, mental health or other additional support challenges, online learning can offer a more accessible and less stressful environment. However, this can only be the case when platforms are designed with universal design principles and adequate support is provided.

Professional and Lifelong Learning

In a rapidly changing world, continuous upskilling is essential. Online learning provides a scalable and flexible model for lifelong learning and professional development.

Many colleges and universities in Scotland offer online learning options, from full degree programs to short courses, allowing flexible study around existing commitments. In addition, many employers now employ staff remotely or on a hybrid basis. Providing young people with opportunities for online learning prepares them for these next steps in their education, employment and life.

Challenges relating to Online Learning

Glow

Glow has been Scotland's national online learning platform since 2007, with major updates in 2014 and incremental changes since. It currently serves around 530,000 users annually and provides secure, single sign-on access to core services like Microsoft 365, Google Workspace for Education, and WordPress blogs. The Scottish Government funds the service (which is managed by Education Scotland) at a cost of around £6.1m per year.

Glow is undergoing a strategic review to ensure it continues to meet the needs of learners and educators in a rapidly evolving digital landscape. While Glow has provided secure access to core tools for over a decade, feedback highlights the need for a clearer purpose, improved user experience, and greater alignment with modern service design principles. This review will shape the next phase of Glow beyond 2027, aiming to deliver a future-proofed, accessible, and value-driven platform that supports collaboration, equity, and innovation across Scottish education.

Digital Infrastructure

Ensuring robust digital infrastructure is fundamental to the success of any online learning initiative. In Scotland, significant progress has been made in improving learner device access, with at least 10 local authorities known to have implemented 1:1 device rollouts for pupils. This marks a positive step towards digital equity, enabling more learners to participate fully in online and blended learning environments.

However, connectivity within schools remains variable. While some schools benefit from high-speed, reliable internet, others—particularly in rural or remote areas—continue to face challenges with bandwidth and network stability. These issues are especially pronounced when large numbers of devices are used simultaneously for data-intensive activities such as video streaming or interactive online lessons. In such scenarios, insufficient connectivity can disrupt learning and teaching, affecting both learners and educators who rely on school networks.

As Scotland considers delivery models that are increasingly dependent on online provision, it is essential to address these infrastructure gaps. Any future strategy must ensure that all schools have the capacity to support high volumes of connected devices without compromising the quality of the learning experience. This includes not only investment in broadband and network upgrades, but also ongoing support and contingency planning to prevent disruption for any learners or teachers joining via school networks.

Pedagogy and Digital Literacy

Digital literacy is now a cross-curriculum theme, not an optional skill. It includes safe and effective use of technology and digital citizenship.

Challenges arise around:

- Uneven implementation of digital literacy frameworks across schools.
- Variation in teacher confidence and capability.
- Socio-economic inequalities exacerbate gaps in access and skills.

The effectiveness of online learning is not inherently inferior to in-person learning. Instead, outcomes depend on strong course design and quality of pedagogical approach, student support systems, engagement strategies, and appropriate technological tools.

Teachers need ongoing professional learning to integrate digital tools effectively. Initial Teacher Education (ITE) programs are embedding digital and data literacy, but gaps remain in confidence and pedagogical innovation.

Online Safety and Security

Data protection and online safety and security are critical considerations when undertaking online learning, particularly for live or recorded material, including:

- Strong Authentication using multi-factor authentication (MFA) and enforcement of strong password policies.
- Data Encryption
- Regular Security Updates
- Clear Privacy Policies informing users what data is collected and how it's used.
- Digital Literacy Training for students and educators about phishing, safe browsing, and reporting abuse.
- Content Moderation through filters and monitoring for inappropriate content.
- Secure Communication Channels using encrypted video conferencing and messaging tools.
- Consideration of screen-time implications.

Artificial Intelligence (AI)

AI offers opportunities for personalized learning and administrative efficiency, but raises ethical, privacy, and bias concerns.

Risks include:

- Inaccurate or biased outputs.
- Data protection and confidentiality issues.
- Over-reliance on AI replacing human judgment.

Guidance is currently being developed on use of AI in education in Scotland, and is expected to emphasise AI literacy for educators and students, and responsible, ethical use aligned with data protection laws.

In addition, the Scottish Qualifications Authority (SQA) has published guidance on the use of AI in Assessments ([Generative artificial intelligence \(AI\) in assessments - SQA](#)).

Table of Existing Identified Online Provision in Scotland

Summary of online learning and support options for schools in Scotland:

Resource	Purpose	What is delivered/ covered?	How it is funded	Who can access?	Website
Nationally Funded Provision					
National e-Learning Offer (NELO)	The National e-Learning Offer complements the delivery of teaching and learning by local authority schools in Scotland.	A blend of live, recorded, and supported resources across the curriculum. Incorporates provision from e-Sgoil and West OS), as well as Education Scotland materials.	Funded by the Scottish Government and includes resources developed within local authorities.	Available to all learners and teachers in Scotland through Glow and other platforms.	National e-learning offer Resource Themes Education Scotland
e-Sgoil	Since launching in 2016 to address teacher shortage in the Western Isles, e-Sgoil has developed into a nationwide community for online teaching and learning.	Range of live, interactive lessons and recorded or static resources across both BGE and Senior Phase. Includes a wide range of subjects including Gaelic, STEM, and levels/courses. I-Sgoil provision for interrupted learners. Also offers supply cover, and some adult learning.	Funded by the Scottish Government.	Available to schools, local authorities, and individual learners across Scotland. Also supports adult learners and apprentices.	Home Page e-Sgoil

Resource	Purpose	What is delivered/ covered?	How it is funded	Who can access?	Website
West OS	<p>For learners: Free online content to support and help with learning and revision at school.</p> <p>For practitioners: High-quality online resources to support and enhance learning and teaching.</p>	Short (10-minute) recorded lessons created by teachers, covering Broad General Education and Senior Phase subjects.	Developed and previously funded by the West Partnership. Access to existing recorded resources continues to be supported through funding of Clickview licences by the Scottish Government.	Free to learners and educators in Scotland via Glow.	West OS – The West Partnership
Digilearn.scot	The Technologies team in Education Scotland provide an online space digilearn.scot.	<p>This includes anytime access to resources for teachers on technology enhanced learning and teacher, digital literacy for learners and teachers, Cyber Resilience and Internet safety.</p> <p>Through the themed weeks a large number of Live lessons for all sectors.</p>	Education Scotland core funding.	Anyone	DigiLearn

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Locally Funded Provision					
SCHOLAR – Heriot-Watt University	Online learning platform developed by Heriot-Watt University (in 1999) Aims to promote equity in education by providing high-quality, accessible content to all learners.	Interactive online learning materials supporting SQA qualifications - specifically National 5, Higher, and Advanced Higher levels across 42 SQA- aligned subjects like English, Maths, Sciences, Modern Languages etc. Offers interactive materials, assessments, revision packs, and study guides as well as diagnostic tools, and print-on-demand study guides.	Delivered via a not-for-profit partnership between ADES and Heriot-Watt University, funded by subscriptions from local authorities, independent schools, and colleges.	Via subscription by LA, school or college. Teachers: to provide support and challenge within school, help EAL learners develop language skills (with ESOL courses) and help those who may be unable to attend school etc. Learners: via Glow login and accessible anytime, anywhere, on any device.	Scholar Online Learning
SW Connects Virtual Learning Campus	Virtual learning platform that expands equitable access to senior-phase courses and skills development across 4 local authorities through flexible digital delivery. Where there is a need for face-to-face time or a requirement for lab time this is built into course plans.	Delivers Advanced Highers, selected Highers and National 5 subjects across various disciplines, plus targeted online support for S1–S3 learners through its “Enhancing Opportunities” programme which offers online teacher support to re-engage those who became disengaged post-COVID.	Funded by the four local authorities in the SW Partnership - Dumfries & Galloway, East Ayrshire, North Ayrshire, and South Ayrshire	Accessible to learners across the four local authorities. A total of 499 young people have been presented for SQA exams through studying with @SWC.	@South-West Connects – SWEIC

Resource	Purpose	What is delivered/ covered?	How it is funded	Who can access?	Website
Tayside Virtual Campus	A regional online learning platform providing senior-phase students with wider course choices, flexible study, and equitable access to qualifications across Tayside.	Access to a wider curriculum through online delivery of SQA Advanced Higher and Higher courses (e.g., Biology, Business, Computing, Modern Studies, PE, Languages, RMPS, Politics). Learners benefit from live virtual classes, structured assessments, portfolio support, and digital skills development via Glow/Microsoft 365.	Combination of Scottish Government grants and local authority investment, managed within the Tayside Regional Improvement Collaborative (TRIC) framework. Home - TRIC - Tayside Regional Improvement Collaborative	Senior-phase learners (S4–S6) in schools across Angus, Dundee City, and Perth & Kinross. Students whose schools cannot offer certain Higher or Advanced Higher subjects locally. Learners needing flexible arrangements (e.g., young carers, interrupted learners).	Virtual Campus – Supporting equity in learning for Tayside schools
Highland Virtual Campus	Is a digital learning platform developed by Highland Council to ensure equitable access to senior-phase secondary education (S4–S6) across the Highland region, especially for pupils in remote or rural areas.	It delivers live, interactive online classes aligned with the Scottish Qualifications Authority (SQA) curriculum, allowing students to study subjects that might not be available in their local schools.	Funded and operated directly by The Highland Council as part of its education services. It draws on the council's existing digital infrastructure and education budget to support staffing.	Available to senior-phase pupils (S4–S6) enrolled in Highland Council schools. Teachers within the Highland Council area can also use the platform to deliver lessons, and schools collaborate to share resources. Access is managed through school enrolment and council systems to ensure secure, structured learning.	Highland Virtual Academy - YouTube

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Independent School Provision					
RGC Online - Robert Gordon's College	The service was introduced to contribute to the growth of the Scottish and global tech ecosystem, addressing the need to make Computing Science a major focus in Scotland, as highlighted by the Logan Review in 2020 for the Scottish government.	Live-taught SQA-accredited courses (taught by experienced teachers from RGC) in a range of subjects i.e. Higher Computing Science, Maths, English. National 5 and Higher students also have access to the RGC Online+ platform, where they can study a range of Diploma modules in tech subjects like AI, Cybersecurity, and Game Design.	Independent provider / Fee-based, but scholarships are available for students from disadvantaged backgrounds.	Fee-charge basis Open to school pupils and mature students across Scotland. Classes are held in the evenings to avoid conflict with school hours.	RGC Online
FIDA (Dollar Academy)	FIDA ("Futures Institute at Dollar Academy") is an open-access education initiative aimed at empowering young people to tackle real-world sustainability challenges through innovative, cross-disciplinary learning	FIDA delivers an International Sustainability Diploma (SCQF Level 6, UCAS-recognised) and free online courses that combine sustainability, design thinking, and entrepreneurship with practical projects aligned to the UN Sustainable Development Goals. It also offers SQA-aligned resources for subjects like Politics, Economics, and Geography, plus themed challenges and teacher toolkits to support creative, real-world learning.	In 2025, FIDA was funded through philanthropic donations, a public fundraising campaign with naming opportunities, and charitable contributions supported by Gift Aid, alongside accreditation and partial backing from educational partners and the Scottish Government.	FIDA is open-access and free for all learners aged 14–18 worldwide, regardless of school type or location. It's designed for students in both state and independent schools, and teachers can also access its resources and toolkits to integrate sustainability and innovation into their classrooms.	Fida – Futures Institute at Dollar Academy

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Think Four (Glasgow Academy)	<p>Think Four is a free, open-access digital learning platform created by The Glasgow Academy to help Scottish pupils prepare for SQA Higher exams. Designed using evidence-based learning principles and aims to support students, teachers, and families by offering engaging, accessible revision resources that complement classroom teaching.</p> <p>Originally launched in 2021 to address pandemic-related educational disruptions, with over 80 videos available at outset.</p>	Delivers short, high-quality video tutorials (around four minutes each) that cover key topics across 13 SQA Higher subjects including English, Maths, Sciences, Social Studies, and Creative Arts, providing exam-focused, accessible, and engaging learning resources.	Is an independent education platform established as a private limited company (ThinkFour Ltd) that is fully funded and supported by The Glasgow Academy.	<p>Scottish pupils (especially those studying for SQA Highers) can use it for revision and learning.</p> <p>Teachers can integrate the videos into lessons or share them as study resources.</p> <p>Parents and carers can access the content to support their child's learning.</p> <p>Anyone with an interest in the subjects can view the tutorials - no login or subscription barriers.</p>	thinkfour Schools - Scotland - YouTube

Resource	Purpose	What is delivered/ covered?	How it is funded	Who can access?	Website
Commercial Provision					
Hashtag Learning – ACHIEVE & SUCCEED	Hashtag Learning offers resources like ACHIEVE and SUCCEED to support students in achieving and succeeding academically with the aim to improve student learning and exam preparation, fostering a supportive learning environment.	<p>ACHIEVE: Online tutor and study toolkit for National 5 and Higher subjects.</p> <p>SUCCEED: Companion platform focusing on study skills, motivation, and wellbeing.</p>	<p>Schools purchase licenses; 'ACHIEVE whole school' is currently priced at £750 per year and 'ACHIEVE subject' which is currently priced at £100 per year. Or £4.99 per month for home learners.</p> <p>SUCCEED requires an ACHIEVE license.</p>	<p>Per school or individual fee basis.</p> <p>Available to Scottish secondary schools and their students where covered by an annual school fee</p> <p>OR</p> <p>Any learner for an individual monthly fee.</p>	<p>ACHIEVE - ACHIEVE more at National 5 and Higher</p>
Scottish Highers Online (SHO)	Provides a flexible education option for adults and young people via an online school to provide greater access and provide an alternative route to achieving National Qualifications.	SQA-accredited National 4, 5, Higher, and Advanced Higher courses. Includes tutor support, Zoom sessions, and structured course materials. (Exam venue in Perth)	<p>Fee-based; reinvests profits to keep costs low.</p> <p>£595 for National Qualifications Courses</p> <p>Sort (6 week) courses for £90 each.</p>	Open to adults and young people across Scotland for an individual fee per course.	<p>Scottish Highers Online</p>

Resource	Purpose	What is delivered/ covered?	How it is funded	Who can access?	Website
Scottish Online Lessons	Flexible online tutoring service led by experienced Scottish teachers and designed to give learners personalised support and to narrow Scotland's attainment gap.	Full video lessons for P1–S6 in literacy, numeracy, and 9 secondary subjects. Includes past paper support and worked examples. All lessons follow the Scottish Curriculum and provide a structured learning experience. A tutoring service is also available.	Individual subscription-based (£15/month or £150/year). Schools can pay an annual licence of £50 which can be used on 2 devices or, where taking more than 20 licences, can pay £5 per month which can be paused over holiday periods.	Available to any learner in Scotland, with offline access via mobile apps meaning it is available to all students regardless of broadband availability. Lessons are suitable for pupils with ASN and are available 24/7, allowing students to pause, rewind, and replay at their own pace.	Home - Scottish Online Lessons
Education Academy Scotland (formerly Saturday School Ltd)	Provide expert support to students, helping them with knowledge consolidation, problem solving skills, exam technique and preparation across a range of SQA National courses.	SQA Approved Centre and tutoring school offering in-person teaching and exams in Glasgow and Edinburgh, plus online courses for National 5, Higher, and Advanced Higher in English, Maths, Biology, Chemistry, and Physics. Programmes include weekly lessons, masterclasses, grade booster days, and awards like the SCQF Level 7 in STEM Leadership.	Fee-based, but offers scholarships and school partnerships to reduce costs.	Open to students across Scotland, including those outside mainstream education (adults, mature students, school aged and home educated learners.) Fees vary by subject and whether taught or self-study and assessment only.	Home - Education Academy Scotland

Resource	Purpose	What is delivered/ covered?	How it is funded	Who can access?	Website
Other Resources					
BBC Bitesize	Provides educationally approved, curriculum relevant self-study and home-learning to support British students outside the classroom, at home and on the go.	Free online study support for ages 3–19, covering all key subjects and levels including National 4, 5, and Highers.	Fully funded by the BBC - In 2024, BBC Children’s and Education announced a £6 million investment into its online education platform.	All learners in the UK. Available in English, Welsh, and Gaelic.	Home - BBC Bitesize

