East Lothian Council

REPORT TO: Education Committee

MEETING DATE: 11 June 2019

BY: Depute Chief Executive (Resources & People Services)

SUBJECT: Education Service Digital Learning Strategy

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1 PURPOSE

1.1 To inform Committee of the preparation and production of a draft Digital Learning Strategy 2019 (Appendix 1) that will formalise our approaches to driving forward digital learning within and across our schools.

2 RECOMMENDATIONS

2.1 The Committee is asked to:-

    i.   Note the work undertaken to date to produce a draft Digital Learning Strategy (Appendix 1) and support ongoing developments to produce a finalised Strategy for implementation across our schools.

    ii.   Note the finalised Strategy document will be brought to a future meeting for approval.

3 BACKGROUND

3.1 In 2016 the Scottish Government published a digital learning and teaching strategy with the aim of creating the conditions to allow all of Scotland's educators, learners and parents to take advantage of the opportunities offered by digital technology in order to raise attainment, ambition and opportunities for all.

3.2 The strategy set out a series of national actions and local expectations structured around the following four objectives:
- develop the skills and confidence of teachers;
- improve access to digital technology for all learners;

- ensure that digital technology is a central consideration in all areas of curriculum and assessment delivery;
- empower leaders of change to drive innovation and investment in digital technology for learning and teaching.

3.3 Digital technology is already embedded within Scottish education and has a place within Curriculum for Excellence, Initial Teacher Education and the Professional Standards set by the General Teaching Council for Scotland (GTCS).

3.4 Digital technology can make a substantial contribution to the improvement agenda by enriching education across all areas of Curriculum for Excellence. If used effectively and appropriately, digital technology can enhance learning and teaching, equip our children and young people with vital digital skills and crucially, it can lead to improved educational outcomes.

3.5 The appropriate and effective use of digital technology within education provides all of our learners with the opportunity to improve their educational outcomes and to develop digital skills that will be vital for life, learning and work in today's increasingly digitised world.

3.6 As part of the National Improvement Framework a focus on school improvement allows evidence to be captured to indicate the percentage of primary schools which are using technology to support effective learning and teaching across the curriculum, as indicated through the Digital Schools Award Scotland Framework.

3.7 The Digital Schools Award programme is designed to support educators, learners and parents to take full advantage of the opportunities offered by digital technology in order to raise attainment, ambition and opportunities for all and is a combination of the Digital Learning and Teaching Programme and 'Digital in the Curriculum'.

3.8 In terms of taking this forward within East Lothian, a draft Digital Learning Strategy was developed in autumn 2018 following extensive consultation which comprised engagement and discussion with children and young people, teachers, school leaders, delivery partners and central Council staff. From this process, strategic principles, objectives and actions emerged, together with priorities for action.

3.9 The draft Strategy sets out a comprehensive approach to deliver effective digital learning in East Lothian schools, and is structured around the following key areas:

1. Digital learning and teaching
2. Professional learning and commitment
3. Leadership
4. Digital inclusion
5. Cyber resilience and responsible use
6. Support services

3.10   A working group has been established and has met twice to look at the key areas for implementation. The group is chaired by an external IT consultant who prepared the draft strategy and membership consists of Education officers, a Primary and Secondary Head Teacher, IT Division officers, the Education Support Officer (Digital Learning) from the South East Improvement Collaborative, Education Scotland Digital officers and an academic from the University of Edinburgh with specific interest in data education

3.11   The working group have progressed with an audit tool that will capture the skills, knowledge and experiences of leaders, teachers/support staff and learners and a survey will be completed by mid-June which will give a baseline across all our schools and a platform to move forward with the implementation to ensure digital learning and teaching is embedded and our learners are being given the best opportunities and experiences in their education journey.

3.12   We have recently appointed Digital Leaders in each of our schools which is a voluntary role and one that will ensure the profile of digital learning is raised and promoted at a local level.

3.13   The recent appointment of the Education Support Officer (Digital Learning) for the South East Improvement Collaborative (SEIC) will strengthen our central team and this officer will be able to facilitate working and engagement across the collaborative authorities to enable knowledge, experiences and best practice sharing to best effect.

4   POLICY IMPLICATIONS

4.1   The Digital Learning Strategy will provide a basis for ensuring that the Education Service delivers on its commitment to ensure all educators, learners and parents take advantage of the opportunities offered by digital technology in order to raise attainment, ambition and opportunities for all. The strategy will align to the Scottish Government's digital learning and teaching strategy and to the Council's Digital Strategy.

5   EQUALITIES IMPACT ASSESSMENT

The subject of this report does not affect the wellbeing of the community or have a significant impact on equality, the environment or economy

6   RESOURCE IMPLICATIONS

6.1   Financial – The delivery of the strategy will require considerable financial resource which will be costed.

6.2   Personnel - The appointment of an Education Support Officer (Digital Learning) in the SEIC will support the delivery of the strategy within and across all schools in East Lothian. This post is funded by the SEIC.

6.3   Other - none

7   BACKGROUND PAPERS

7.1   East Lothian Education Service Draft Digital Learning Strategy 2019 (Appendix 1)

7.2   Scottish Government Digital Learning and Teaching Strategy 2016
https://beta.gov.scot/policies/schools/digital-learning-and-teaching/

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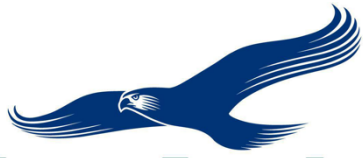
DIGITAL LEARNING STRATEGY

October 2018

DRAFT

CONTENTS

East Lothian Digital Learning Strategy

1: Learning in the Digital Age

1.1 Children and young people are growing up in a world where digital technology is embedded in all aspects of life. They have access to technologies that transform how they connect, share, work, play and learn.

1.2 Digital technology makes a substantial contribution to the quality of learning and teaching in schools. It helps children and young people acquire the skills, attributes and competencies that are so vital for learning, life and work in an increasingly digitised world. The skilful use of digital technology in our schools and early learning settings can transform learning, raise ambition and improve educational outcomes.

1.3 In 2016 Scottish Government launched a Digital Learning and Teaching Strategy with the following aims:

1. Develop the skills and confidence of educators in the appropriate and effective use of digital technology to support learning and teaching.
2. Improve access to digital technology for all learners.
3. Ensure that digital technology is a central consideration in all areas of curriculum and assessment delivery.
4. Empower leaders of change to drive innovation and investment in digital technology for learning and teaching.

1.4 East Lothian's economic future depends on people with the digital skills, attributes and competencies required to contribute to the rapidly growing global digital economy. This means that our teachers, learners and parents must take full advantage of the opportunities offered by digital technology and embrace the growth and development of different types of digital learning.

2: Our Vision for Digital Learning

2.1 **Our vision is that every East Lothian learner has the highest quality digital learning experiences and is empowered to develop the digital skills and knowledge required for learning, life and work.**

2.2 In order to achieve this aspiration, a clear strategy is required which:

- sets out a clear pathway for the development of digital learning in schools;
- develops the skills and confidence of educators and learners in the appropriate and effective use of digital technology;
- ensures opportunities for all learners to access digital technology;

- builds on existing strengths and effective practice;
- ensures that digital technology is central to curriculum and assessment delivery;
- empowers leaders to drive innovation and investment in digital technology for learning and teaching;
- highlights the expectations and responsibilities of schools and of Council services.

3: Digital Learning Strategy

3.1   The Digital Learning Strategy was developed using an extensive consultation which comprised engagement and discussion with children and young people, teachers, school leaders, delivery partners and Council staff. From this process, strategic principles, objectives and actions emerged, together with priorities for action. The analysis and evaluation of this research is contained within the associated Digital Learning Review Report (October 2018).

3.2   It is recognised that digital learning is constantly evolving, and schools must embrace the developments brought about by the speed of change associated with digital technologies. To achieve this, there must be a robust infrastructure with appropriate digital technologies and software, good pedagogical practice, digitally literate practitioners, strong school leadership and effective support.

3.3   The Strategy sets out a comprehensive approach to deliver effective digital learning in East Lothian schools, and is structured around the following key areas:

1. Digital learning and teaching
2. Professional learning and commitment
3. Leadership
4. Digital inclusion
5. Cyber resilience and responsible use
6. Support services

Note: In this document the term 'schools' is used to cover various forms of educational settings, including nursery, primary and secondary establishments and early learning centres.

4: Digital Learning and Teaching

4.1 Digital Learning is more than providing students with a digital device. Effective digital leaning combines the skilled use of technology, digital content, and teaching that engages and motivates learners. It is an essential part of the delivery of Curriculum for Excellence.

4.2 Technological integration in learning must also happen in ways that are meaningful, and which foster creativity, ambition and an interest in life-long learning. Digital learning must equip learners with the skills, knowledge and confidence to become innovative digital creators, effective digital citizens and successful entrepreneurs, so they can take advantage of the opportunities that exist in the digital economy and beyond.

4.3 Rapid technological advances in recent years have created exciting new opportunities in digital learning, particularly in the use of the Internet and mobile devices. The growth of online and cloud-based technologies creates a platform for 'anytime anywhere' learning, providing access to a wealth of learning materials in every subject and in a variety of media.

4.4 In East Lothian *Google Classroom* is currently the preferred learning platform for schools and this provides teachers and learners with a range of high quality applications including Gmail, Google Docs and Slides, Calendar and Forms. Google Classroom enables teachers and learners to communicate, share resources, and set homework and learning tasks. There are 17,000 active users in East Lothian schools.

4.5 Technology is also frequently used as an integral component of teaching and learning. This includes the use of interactive whiteboards and panels, Internet-based research and use of software and apps for word processing, presentations, spreadsheets, and game-based learning. Students in the senior phase are able to use specialist technologies and software to support learning in subjects such as music, art and design, food technology, physical education and design technology. Digital technology is also used to support children and young people with addition learning needs.

4.6 There are examples of innovation and excellence in East Lothian and this should increase with opportunities for learners to engage meaningfully with new and emerging technologies such as robots, drones, video and editing software, 3D printers, video conferencing, and casting technologies. There should also be more opportunities for learners to understand, apply and create new digital solutions or to develop skills in computational thinking, coding, and data science.

4.7 East Lothian's Technology Framework establishes standards and expectations in digital learning and in the use of technology. The Framework, which is based on Curriculum for Excellence Technology national benchmarks, sets out progression in the knowledge and skills associated with digital learning and technology at every stage of schooling. Implementing this Framework effectively is a critical component of East Lothian's Digital Learning Strategy.

4.8 A key consideration for East Lothian is whether to remain with a singular learning platform to provides a significantly broad range of digital tools and resources for schools. Google Classroom is popular with teachers and school leaders and the additional use of Glow,

Scotland's national intranet, would increase the availability of resources for learning and teaching, and promote better professional learning and collaboration.

4.9 Glow offers enhanced opportunities for staff to learn from one another through identifying, developing and sharing innovative practice in the use of digital technologies for learning and teaching. Glow also provides staff and learners with access to a range of tools, applications and resources, including Microsoft Office 365 and its suite of business standard applications such as Word, Excel, PowerPoint and One Note.

4.10 All East Lothian schools are equipped with desktop computers and many classrooms have an interactive board or panel. The capital budget enables a 4-year refresh of desktop computers, and schools have a devolved budget, part of which they may use to acquire technology. There has been a significant increase in the use of mobile devices, and the infrastructure is in place to enable staff and learners to connect personal devices to school networks.

4.11 East Lothian has invested heavily in Google Chromebooks as its principal mobile learning technology and 2,700 Chromebooks are currently deployed in East Lothian schools.

4.12 This reflects the decision to implement Google Classroom as the Council's principal digital learning platform, since Chromebooks provide a range of Google apps including Gmail, Google Docs, Slides and Calendar.

4.13 Whilst there is a small number of iPads within establishments, schools require access to a wider range of Apple technology, particularly in the early years and also to support secondary subjects such as Music, Design Technology and Art and Design, where Apple software is prevalent within the world of work. The use of iPads could also significantly enhance the support for children and young people with additional learning needs.

4.14 Although technologies such as Chromebooks, Promethean panels and 3D printers are a welcome addition to the school estate, a significant number of desktop computers and other technologies need to be maintained in a good state of readiness. East Lothian, along with other education authorities, faces the challenge of maintaining legacy technology whilst at the same time adopting new and emerging learning tools that will help children and young people develop the knowledge and skills required for learning, life and work.

4.15 Technological advances provide opportunities for schools to implement new and exciting approaches to digital learning and, moving forward, East Lothian must ensure that the infrastructure is in place to enable the integration of future technologies including apps-based learning, casting, augmented reality, and visualisation. In the future, the delivery of teaching and learning simultaneously across geographically dispersed settings is likely to be supported through video conferencing and teleconferencing technologies. It is also inevitable that the integration of personal devices will become an integral and essential component of learning and teaching in the years ahead.

4.16 The growing demand for technology to support digital approaches to learning and teaching, together with the rapid changes in the nature of hardware and software, will

place increasing demands on the Council's capital budget, and also revenue funding for ongoing technical support, licences and other technology-related spend.

4.17   The prevailing economic challenges facing East Lothian, together with a rapidly increasing school population resulting from significant house building programmes across the authority, further increases the challenge. There needs to be a clear plan in place to enable the Council and its schools meet this challenge.

4.18   The Digital Learning Strategy establishes the following expectations and entitlements.

1.   The East Lothian Technologies Framework should be fully implemented by all schools to ensure progression in the skills and knowledge associated with digital learning and technology.

2.   All learners should have high quality digital learning experiences and opportunities to apply and improve their digital literacy skills, within and beyond the classroom.

3.   All learners should have access to an adequate supply of appropriate digital devices to enhance and support their learning.

4.   Staff and learners should have access to a broader range of technologies, including Apple.

5.   Staff should make regular and effective use of digital technologies as an integral part of learning and teaching across all curriculum areas and year groups.

6.   East Lothian schools and central services should engage with Glow to provide additional tools and resources, and to increase opportunities for collaboration.

7.   Learners should have increased opportunities to develop skills in computational thinking, coding, making and data science.

8.   Learners should have increased opportunities to engage in online collaborative learning and to share their digital experiences and skills.

9.   Learning technology should be used to foster creativity amongst learners.

10. All educational establishments should have systems in place to audit, review and evaluate the effectiveness of digital learning.

11. Partnerships with the business community and skills providers should be promoted to support the development of digital learning in schools.

5: Professional Learning and Commitment

5.1 For East Lothian schools to deliver high quality digital learning, teachers must be skilled and confident in the use of digital technology. GTCS Standards also makes it incumbent on practitioners to continually update their level of skills and knowledge:

- *Teachers should be able to demonstrate a critical understanding of digital technologies and how these can be used to support learning* (Standard for Registration);

- *Teachers should have secure knowledge and understanding of current guidance on the use of digital technologies in schools and know how to use digital technologies competently to enhance teaching and learning* (Standard for Career Long Professional Learning).

5.2 Developing the skills and confidence of practitioners in the appropriate and effective use of digital technology is a key driver of the Digital Learning Strategy. However, many teaching staff across Scotland lack confidence in using learning technology and training is required to meet their professional learning needs and to ensure successful implementation of the Council's Technologies framework.

5.3 Along with formal training, the establishment of communities of practice and peer networks will enable teachers to collaborate and share digital resources across the authority.

5.4 East Lothian's professional development model should reflect the following approaches.

(a) **On-going professional development at school level** through, for example, peer observations, team teaching, learning conversations, teach meets and sharing of practice within the establishment. This form of professional learning should target teachers' everyday needs and practices.

(b) **A structured and progressive programme of in-service training**, including authority programmes and learning events, face-to-face and online learning opportunities. Such training should be differentiated to facilitate introductory, as well as more advanced teacher learning.

(c) **On-going central support - both pedagogical and technical** – which provides advice and guidance for practitioners in learning technology and how it may be deployed most effectively to support learning and teaching.

(d) **Communities of practice and peer networks**, providing access to more and better educational content and models of effective teaching practices.

5.5 The Scottish Government and Education Scotland enable all educators to access a variety of digital tools and services through Glow. These can be used to support career long professional learning through, for example:

- *Yammer* - an online discussion and collaboration tool that allows educators to make connections and share resources in a secure social network.

- *Glow TV* - providing national interactive broadcasts allowing professional dialogue between the host and the participants.

- *Glow Meet* - enabling practitioners to engage in professional dialogue, share documents and deliver presentations.

- *Glow Blogs* - used by schools and education authorities to share information and facilitate professional working and interaction.

- *Professional learning communities* - online spaces which allow educators to share resources, work collaboratively and take part in online discussions across a range of curriculum areas and educational topics.

5.6   In developing an East Lothian professional learning model, consideration should be given to the experience and skillset of candidates when making appointments to schools. Critical digital skills would include proficiency in:

- the use of multimedia tools as an integral part of learning and teaching
- using technology to promote creativity and innovation
- using productivity software including Microsoft and Google products
- understanding IT security and data privacy requirements

5.7   In order to ensure that East Lothian teachers are skilled, knowledgeable and confident in the use of digital technology, the Digital Learning Strategy establishes the following expectations and entitlements.

12. A structured and progressive programme of professional learning should be established which provides basic training for teachers in digital learning, as well as opportunities to develop skills and expertise.

13. Professional learning should provide opportunities for staff to work with innovative and creative technologies, for example, robotics, coding, gaming, design technology, film and multimedia, 3D printers and drones.

14. Professional learning for staff in learning technology should be strongly promoted as part of a teacher's work within the GTCS standard for career long professional learning.

15. Consideration should be given to the re-establishment of IT co-ordinators (or digital leaders) within schools or clusters.

16. There should be an increased capacity to deliver training, support and advice to schools. This could involve cross-authority collaboration with partner councils who have established learning technology teams.

17. East Lothian should contribute to the work of a regional collaborative around digital learning to enable the sharing of practice and resources.

18. The Glow platform should be promoted in order to broaden the range of educational resources and professional learning available to East Lothian teachers.

19. Consideration should be given to the experience and digital skillset of candidates when making teaching appointments.

20. Work should be undertaken to establish school partnerships with the business community and local skills providers to promote and develop teachers' digital skills.

6: Leadership

6.1 The Digital Learning Strategy establishes a clear vision for the development of digital learning, with a key aim of ensuring effective collaboration and joint working between IT and Education Services. Successful implementation of the Strategy requires increased involvement by Education personnel in strategic planning and decision making. It also requires the engagement of a wider range of stakeholders and the devolution of some aspects of decision making.

6.2 An East Lothian Strategic Management Group (Digital Learning) should be established with representation from Education Services and IT Services and school leaders. The group would support planning and strategic decision-making in matters relating related to learning technology, as well as monitoring implementation of the Digital Learning Strategy.

6.3 An East Lothian Digital Learning Collaborative should also be established, with representation from each of the associated school groups, members of Education and IT Services, Community Education, employers, higher education, parents, carers and learners. The Collaborative would focus on learning and teaching, rather than technical aspects, and will be a key forum for deriving the direction of travel for digital learning in schools.

6.4 Senior leaders within schools should ensure that the innovative use of digital learning is nurtured, promoted and supported actively. In order to foster more innovation, school leaders and practitioners should have greater autonomy in decisions about digital resources, including software and apps.

6.5 The Council needs to establish clear and agreed priorities for capital and revenue spending over the next 3-5 years, taking account of the increasing demand for learning technology in schools and the significant projected growth in pupil population. Education needs to play a significant role in these decisions and in strategic planning.

6.6 East Lothian needs to empower leaders of change to drive innovation and investment in digital technology.   The Digital Learning Strategy sets out the following expectations and entitlements.

21. There should be effective collaboration and joint working between IT and Education Services.

22. Headteachers and senior leaders in establishments should ensure digital learning is an integral feature of the curriculum, teaching and learning.

23. School improvement plans should clearly identify the contribution that digital learning makes to outcomes for children and young people.

24. Headteachers and school practitioners should have more autonomy in decisions about digital resources.

25. There should be systematic processes in place to review and evaluate the impact of digital learning in schools.

26. An East Lothian strategic management group (digital learning) should be established with representation from Education and IT Services and school leadership.

27. An East Lothian Digital Learning Collaborative should be established, with representation from each of the associated school groups, members of Education and IT Services, Community Education, employers, higher education, parents/carers and learners.

28. Priorities for capital and revenue spending over the next 3-5 years should be determined, taking account of the increasing demand for learning technology in schools and the growth in pupil population.

7: Digital Inclusion

7.1 For young people, digital participation is essential in developing the skills required for learning, life and work.   A significant number of East Lothian children and young people live in areas of social and economic disadvantage and are unable to access the same levels of technology and online services as children in more affluent areas. Digital exclusion can impact negatively on wellbeing, educational attainment and employment opportunities.

7.2 In East Lothian there needs to be a formal strategy for promoting digital inclusion, beyond the current Pupil Equity Funding and Closing the Attainment Gap initiatives. A key aim of the Council's Digital Learning Strategy should be for schools to ensure that all learners are able to access mobile devices that support learning, irrespective of socio-economic background.

7.3 Learning technology can make a significant difference to children and young people with additional support needs and a wide range of technological solutions are available to help

learners access the curriculum and develop the skills required for learning, work and independent living.

7.4   In East Lothian 24% of learners have additional support needs.   Support is provided through the Council's service level agreements with external agencies such KeyComm, CALL and the Royal Blind School.

7.5   More than 150 East Lothian children require specialist technology to support their learning. Historically, East Lothian employed specialist staff to manage and deliver assistive technology programmes and respond to referrals made by schools for advice and support. Policy and practice relating to ASN has recently changed to empower schools to take decisions about the support required for learners, rather than rely on staff at the centre to respond to referrals and deliver solutions.

7.6   The Council's aim of building capacity in schools and upskilling staff in determining universal, additional and targeted support, is seen as the best and most sustainable long-term model. In order for this to be effective, the following interventions are required:

- Targeted training and professional learning opportunities for the Council's Support for Learning and teaching staff.
- Improved systems for sharing resources and highlighting effective practice in schools.
- Use of wider networks, such as Glow, to support professional learning and advice.
- Improved support for schools from IT Services in facilitating the procurement and implementation of assistive technology.

7.7   Technology can provide a catalyst and a mechanism for improving parental engagement and to help to bridge the gap between home and school. In East Lothian parental engagement is promoted though school websites and blog pages on Edubuzz, and through use of social media platforms such as Twitter and Facebook. The implementation of the Google Classroom learning platform also enables learners to log in at home and share with parents/carers what they are doing at school.

7.8   Consistency in the ways that schools communicate and engage digitally with parents through blogging, websites and in the use of social media, would improve communication with parents and carers. As part of the Digital Learning Strategy, East Lothian schools should actively encourage the use of social technologies to communicate with parents and to share pupils' work and achievements.

7.9   In order to promote digital inclusion, the Digital Learning Strategy sets out the following expectations and entitlements.

29.   All learners including, those with additional support needs, should be able to access appropriate digital technology.

30.   Training should be provided for schools in designing support involving the use of assistive technology.

31. School and Council Inclusion policies should highlight the role of digital technology in widening access to learning.

32. Digital inclusion should be a key consideration in planning around Pupil Equity Funding and Closing the Attainment Gap strategies.

33. Schools should provide additional access to technology for learners from disadvantaged communities.

34. Digital technology should enable children and young people unable to attend school to access content and resources.

35. Digital technology should be used to improve parental engagement and to share pupils' work and achievements.

8: Cyber Resilience and Responsible Use

8.1 The exponential developments in technology, online services and data management systems, and the changes in information sharing requirements set out by UK government have created a new landscape for education authorities and schools. E-safety and data security are now fundamental requirements of a safe and secure environment for learning.

8.2 Within Broad General Education, all East Lothian learners receive e-safety education through progressive programmes such as Keeping Myself eSafe. However, the constantly changing nature of online services and technology means that school e-safety programmes and materials should be reviewed and updated on a regular basis.

8.3 East Lothian deploys Smoothwall firewall and filtering systems to ensure online security and to safeguard users. The system, which is managed by IT Services, operates well and provides robust data filtering, integrity and security. Connection to confidential administrative services and the corporate network is also secure and operates efficiently.

8.4 The filtering system produces a range of alerts relating to web access in radicalisation, adult content, suicide, bullying, drug use, etc. A review of the Council's filtering systems would help to reassess delivery of essential content, produce a more responsive system and ensure systematic monitoring and action around alerts.

8.5 East Lothian's approach, in line with other Scottish Councils, is based on responsible use. Whilst there is a clear need to achieve the right balance between controlling and enabling users, school staff and learners report that filtering frequently blocks access to legitimate websites.   Network security should be reviewed on an ongoing basis to allow access to required services whilst maintaining a secure environment.

8.6 East Lothian Council and its schools are custodians of personal information about children, young people and families, which is required to support effective decision making and is used for reporting to statutory bodies. It is essential to continue to protect and safeguard such information and provide services in a way which limits breaches, loss and security issues.

8.7 School staff require a clear understanding of issues associated with Internet and data security, and the appropriate use of social media and personal accounts. There is a need for more staff training in data protection and GDPR to ensure staff have up-to-date knowledge of the associated legislation and personal responsibilities.

8.8 In order to ensure effective cyber resilience and e-safety for all staff and learners, the Digital Learning Strategy establishes the following expectations and entitlements.

36. Cyber resilience and internet safety should be a key priority in all schools and education settings.

37. Training and awareness raising in data protection, privacy and online safety should be a mandatory element of continuing professional learning of all school staff.

38. All Council staff should be aware of the statutory requirements and personal responsibilities associated with GDPR and online security.

39. All users should engage with social media/networks in a way that is safe, ethical and responsible.

40. School and Council staff should ensure the safe and secure storage and management of sensitive and confidential information.

41. The Council's filtering protocols should be reviewed to ensure delivery of essential content and systematic monitoring of alerts.

42. School e-safety programmes and resources should be reviewed and updated on a regular basis.

9: Support Services

(a) Infrastructure

9.1 The successful and progressive integration of digital technologies into learning and teaching requires a robust, efficient and secure wireless infrastructure which will support the evolving needs of learning and teaching. Secure, responsive and flexible networking technologies provide access to a wealth of online resources that are fundamental in meeting the needs of users and in achieving a highly responsive digital infrastructure.

9.2   East Lothian's IT Service manages the Council's network infrastructure in partnership with BT Openreach and SWAN Interconnect, providing a connection to the Internet equivalent to 1 GB. Each primary school has 100 MB connectivity to the ring and each secondary 1 GB. Upgraded recently, this represents a significant increase in bandwidth for schools.

9.3   As the demand for web-based services continues to grow in schools, it is likely that the current connections will be insufficient to meet the needs of future teaching and learning. The Digital Learning Strategy should ensure clear and effective systems are in place to provide increased network capacity for each school as demand grows.

9.4   Wi-fi provision should be sufficient to meet the digital learning requirements for all staff and learners. Action should be taken to improve network performance in schools to ensure that wi-fi problems are not detrimental to learning.

(b)   Support for schools

9.5   Effective technical support systems for schools should be in place. There should be first line technical support within schools/clusters should be strengthened and teaching staff should be offered training in basic troubleshooting.

9.6   There are innovative models in place in other Councils for enhancing the level technical support for schools and these could be implemented in East Lothian. This includes for example, having a staff member in each school trained as a first line of support and, in secondary schools, training enabling students to carry out some of the support functions.

9.7   Guidance and advice on curriculum and pedagogy is valued by schools and this service is currently provided by the Council's Learning Technology Officer.   It is clear that the demand for support – both technical and advisory - will intensify in the years ahead.   East Lothian Council needs to have a strategy to ensure that support systems are responsive and effective.

9.8   The re-establishment of digital leaders (formerly IT Co-ordinators) in each school or school group cluster, would help to increase capacity for providing support and advice, for sharing resources and effective practice and to support training of colleagues. Increased engagement with Glow will also broaden the range of educational resources and professional learning available to East Lothian teachers.

9.9 The establishment of an East Lothian Digital Learning Collaborative focusing on learning and teaching, rather than technical issues, will be a key forum for deriving the direction of travel for learning technology in schools and also providing advice and guidance.

9.10 Consideration should be given to the potential benefits of collaboration and partnerships with other education authorities, through regional collaboratives or joint working arrangements. Access to learning technology specialists in other local Councils, or establishing shared posts, is a way to significantly increase knowledge and skills, sharing effective practice and supporting schools.

(c) Integrating personal technologies

9.11 In East Lothian, teachers and learners are able to connect personal devices, such as phones, tablets and laptops to school networks, a policy called *Bring Your Own Device* (BYOD). This recognises that many learners arrive in school with more computing power on their person than the school is able to provide in the classroom, and although BYOD presents operational and technical challenges, these are outweighed by the potential significant gains to learning and pupil achievement.

9.12 A growing number of secondary students are using their own devices as part of learning, for example, for research associated with social subjects, science, technology and English, and as a calculator in maths. Smartphones are frequently used to access web services such as Google Classroom and Show My Homework. Many students use their own data via 4G networks to access the Internet during school time, and personal hot spotting amongst groups of learners is commonplace in all secondaries.

9.13 As an increasing range and number of mobile devices are deployed in schools. The WIFI network should be fully developed to allow learners to connect their devices seamlessly. Facilities should also be provided in school to allow the charging of personal mobile devices.

9.14 The facility for teachers and learners to connect personal technologies to school networks should be a key element of the Council's Digital Learning Strategy.

(d) Home and remote working

9.15 Systems to support home and remote working by school staff need to be improved. For most teachers, connectivity to the Internet for planning and school related work at home is essential, and systems should be in place to enable all school staff should to access Council/school servers and Internet when using Council laptops at home. This will be facilitated by the roll out of *Direct Access* technology.

9.16 The standard productivity tools provided by East Lothian should be improved to support home and remote working by school leaders and teachers. All school staff should have access to fit-for-purpose and mobile friendly productivity tools to support their day to day work.

9.17 School leaders have numerous user accounts and passwords for online services such as RIVO, Evolve and PICOS. Headteachers typically have 14 separate accounts and passwords and some school business managers have up to 40. Streamlining authentication systems and reducing the number of accounts and logins required by school leaders and business managers will improve workflow.

(e) Refreshment and change programmes

9.18 East Lothian, in common with other local authorities, undergoes regular programmes of

new school building, extensions and refurbishments. School building, extension and refreshment programmes are opportunities to provide schools with high quality learning environments and new technology. Almost every school building project will have the requirement for technology as part of its infrastructure.

9.19   It is important for all teams involved in the building projects to work collaboratively and identify all digital assets required to be in place. Identifying the total capital and revenue cost of each project and the ongoing revenue costs for base budget calculations is essential.

9.20   In East Lothian, it is planned that each classroom in a new school building will have, as standard, a new interactive panel, a teacher's computer, and a wireless access point (depending on existing coverage and network cabling). New computer labs will be equipped with the required number of computers and the standard software for the subject area.

9.21   Asset management and refreshment programmes should be shared with senior leadership in Education Services and schools, and school staff should be kept up to date with plans for asset replacement and likely timescales. The Council's technology refreshment programme should be reviewed to achieve a flexible and responsive approach to asset replacement.

9.22   Effective support for schools underpins successful digital learning and teaching.   The Digital Learning Strategy sets out the following expectations and entitlements.

43.   Effective systems should be in place to ensure adequate network capacity for each school as demand for online learning and teaching grows. This should include regular review of school bandwidth usage to ensure appropriate and effective digital access.

44.   Wi-fi provision should be sufficient to meet the digital learning requirements for all staff and learners. Action should be taken to improve network performance in any schools where wi-fi problems are detrimental to learning.

45.   Procurement systems for technology, software and apps should be reviewed and streamlined in order to ensure a responsive and efficient service to schools.

46.   Effective technical support systems for schools should be in place. There should be first line technical support within schools/clusters as well as opportunities for students in secondary schools to be trained in supporting staff in the use of technology. Teaching staff should be offered training in basic troubleshooting.

47.   Effective systems for providing advice and guidance in digital learning and teaching should be in place. The current provision should be expanded through the creation of an East Lothian Digital Learning Collaborative, joint working with other authorities and the re-establishment of digital learning co-ordinators in each school or cluster.

48.   Systems should be in place to enable teachers and learners to connect their personal technologies to school networks. Problems associated with network access in schools should be addressed.

49. All school staff should have access to Council/school servers and Internet when using Council laptops at home.

50. All school staff should have access to fit-for-purpose and mobile friendly productivity tools to support their day to day work.

51. Authentication systems should, where possible, be streamlined to reduce the number of user accounts and logins required by school leaders and business managers.

52. All Council teams involved in school building projects should work collaboratively to ensure that the learning technology provision is fit for purpose and represents best value for money.

53. All building and refurbishment programmes should have a defined budget for learning technology.

54. Asset management and refreshment programmes should be shared openly with senior leadership in Education Services and schools, and school staff should be kept up to date with plans for asset replacement and likely timescales.

55. The Council's technology refreshment programme should be reviewed to achieve a more flexible and responsive approach to asset replacement.

10: Implementing the Strategy

10.1 Following approval and sign off by East Lothian Council and its Education Committee, the Digital Learning Strategy should be shared with all key stakeholder groups including schools and Council Services.

10.2 The 'Expectations and Entitlements' set out in this document should form the basis of more detailed action plans in the following areas:

- Digital learning and teaching
- Professional learning and commitment
- Leadership
- Digital inclusion
- Cyber resilience and e-safety
- Support services

10.3 Action plans should determine priorities for improvement and show how expectations and entitlements will be delivered, identifying clear outcomes and measures of impact. The roles and responsibilities of the Council's IT and Education Services should be clearly defined, along with timescales and resources. In addition, the Council needs to establish clear and agreed priorities for capital and revenue spending over the next 3-5 years, taking account of the increasing demand for learning technology in schools and the significant projected

growth in pupil population. Education needs to play a significant role in these decisions and in strategic planning.

11: Evaluating the Strategy

11.1   There are several approaches which can be used by the Council and educational establishments to evaluate the impact of digital learning and in supporting learners and improving outcomes for children and young people. Ongoing monitoring and evaluation of the Digital Learning Strategy will identify approaches which are successful, and those which need to be redefined or changed.

11.2   The impact of the Digital Education Strategy will be evaluated in the following ways:

- Education Service reviews and audits of digital learning, including scrutiny of school improvement plans, Standards and Quality reports, and associated policy documents.
- Ongoing reviews of progress in implementing the Council's Technologies Framework.
- Using Quality Indicator 3.3 from *How Good is our School 4* as a benchmark for school self-evaluation and improvement planning.
- Monitoring by the East Lothian Strategic Management Group to identify trends and effective practice in digital learning.
- Analysis of key metrics relating to attainment and inclusion.
- Feedback and evaluation from programmes of professional learning and training.
- Satisfaction ratings relating to the Council's provision of technical and advisory support for schools.
- Feedback from stakeholders, including children and young people, parents/carers and school and Council staff.

12: Links

- Scottish Government Digital Learning and Teaching Strategy 2016
  https://beta.gov.scot/policies/schools/digital-learning-and-teaching/

- National Technologies Framework
  https://education.gov.scot/scottish-education-system/policy-for-scottish-education/policy-drivers/cfe-(building-from-the-statement-appendix-incl-btc1-5)/curriculum-areas/Technologies

13: Appendices

East Lothian Technologies Framework