

LOGGED-ON State-of-Art report - England

1.0 Introduction

1.1 Demographics of England

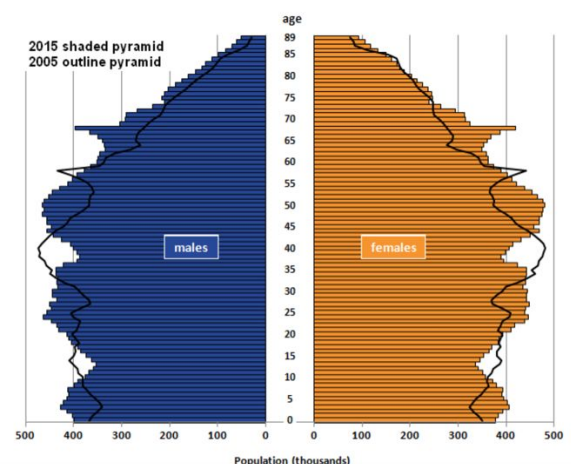
England is a country within the United Kingdom (UK) of Great Britain and Northern Ireland. It is the largest nation within the union with both by area and population. England has an area of 130,395 km² which is around 54% of the UK. England has internal boundaries with Wales to the West and Scotland to the north but most of the border is coastline with the North Sea to the East, English Channel to the South and Irish Sea to the West.

The Economy is based on a market economy with a supporting public sector (known as the welfare state) which provides universal education and health care to all to all and a social security system that acts as a safety net to avoid cases of absolute poverty. The economy is mixed with a highly specialized manufacturing sector and financial and administrative services being significant sectors. Primary manufacturing is in decline and has since the 1980s.

England does not have a government separate from that of the UK. It is divided into a patchwork of administrative units with 48 individual counties and some urban regions that have administrative responsibilities that do not match county boundaries. The counties have relatively little political autonomy whilst the city authorities have slightly more.

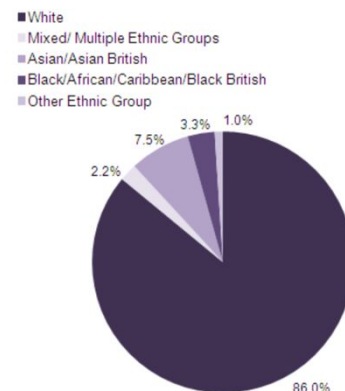
1.2 Population

The population of England is 54,786,300 and accounts for 84% of the UK's population. Population growth within England is 0.86% which represents the highest population growth within the union and is largely driven by net inward migration. The population is ageing significantly and the percentage of the population of working age has been falling steadily and is predicted to continue to do so.



Ethnically, England (and Wales – as population statistics are combined) is 86% white. Of this white population 5.5% is non British with European, US and commonwealth countries being significant proportion of this figure.

Net inward migration continues to be positive with Long-term immigration for study was estimated to be 167,000 in YE December 2015, compared with 191,000 in YE December 2014 (not statistically significant). This was driven by a statistically significant decrease of 22,000 for non-EU citizens (112,000).

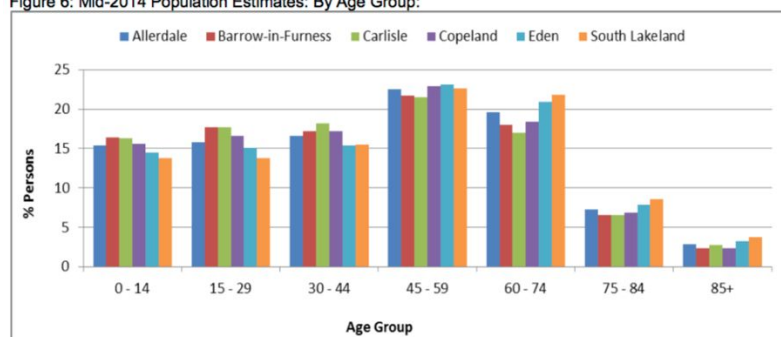


1.3 Local Demographic/economic factors

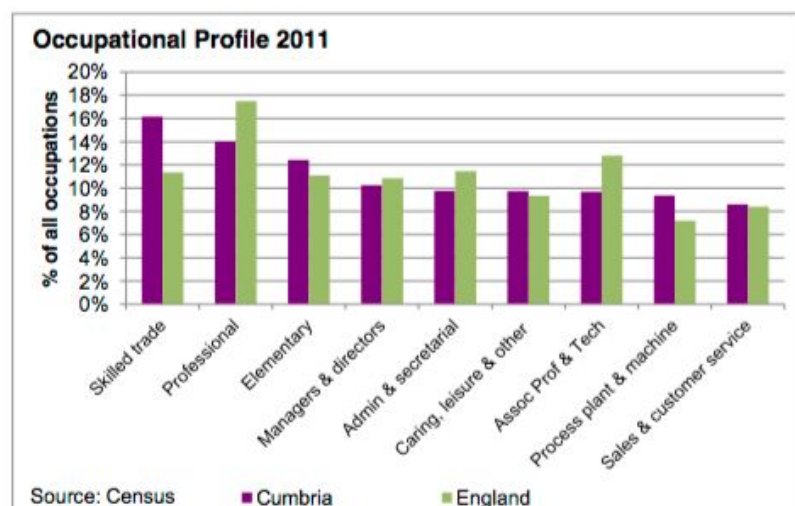
Kendal College is situated in the County of Cumbria in the North west corner of England. It has a mixed rural economy which is performing above the national average but with significant pockets of social deprivation, particularly around the west coast of the county which was particularly hard hit by the long term decline in heavy manufacturing. The county is the second largest in England by area.

The county has a vibrant visitor economy, being the home of the Lake District National Park. The mountain range at the centre of county generates this tourism but makes infrastructure and communications difficult. The county experiences an exaggerated version of some of the national issues, an ageing population and employment opportunities at both the high and low end of the earnings spectrum but little in the middle, as illustrated by the tables below;

Figure 6: Mid-2014 Population Estimates: By Age Group:



Source: Office for National Statistics



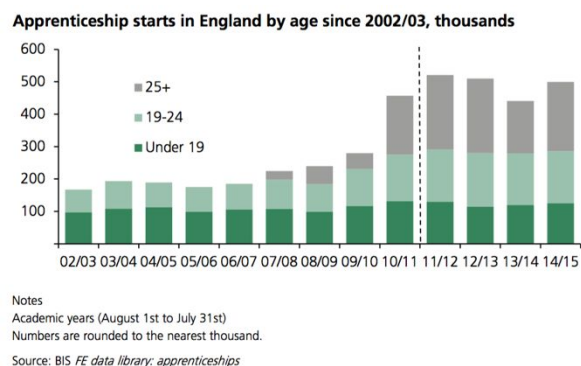
Source: Census

■ Cumbria

■ England

1.4 Description of the English education system

Public education in England for children aged 4 - 18 is effectively free, regardless of nationality. The academic year has three terms, from September to December, January to Easter and Easter to July. The ultimate responsibility for the education lies with the Department for Education but is devolved down to become a responsibility for each county to provide to age 16. Post 16 education was made compulsory in 2015 and is provided by a variety of Sixth form attached to Schools, Sixth form Colleges and Further Education Colleges. These Colleges lie outside local authority (county) control as non-profit making incorporations.



The majority of English children attend an Early years provider (Nursery or Childminder) prior to starting school. 15 hours a week for 2-4 year olds is paid for by government. Parents who need more than (or at an earlier age) this would pay the full costs of this provision, which more expensive than European averages at around £5000 (£5600 Euros). Children start school the year they turn 4 years of age. They attend primary school from reception grade to Year 6 (age 11). After which they attend secondary school from years 7 to 11 (age 16) with the curriculum narrowing at year 10 where students typically drop some subject to focus on 8 'GCSE' subjects which must include English, maths and Science. Beyond this students select a post compulsory provision between 16-18. Although around 4-5% of young people nationally do not receive this provision and drop out of education.

Throughout the English Educational system parents and children have an element of choice as to which Nursery School, College or University that they attend. This choice is subject to availability of places, and in post compulsory and Higher Education the students must meet the entry criteria which is allowed to be only judged on ability. This translates into a quasi-competitive system between schools, who are funded per head and an openly competitive system for Colleges and Higher Education institutions (with elements of collaboration between institutions). The post compulsory sector offers a diverse range of options. The traditional model splits students into 'academic' and 'vocational' pathways. However there is now a range of 'in work' apprenticeship option and 'technical' qualifications programs designed to promote both skills and academic progress.

Apprenticeship (in work) education is a growing factor within the English education system and can provide an attractive alternative to education that is School or College based. 499,900 started such a program in 2015, though only around a quarter of these were 16-18 a significant number were in the 19-24 age group.

Around 35% of 18 year olds progress directly to a Higher Education Institution (HEI) where the government will pay their fees of £9000 per year (in most universities). Students who earn more the £21,000 after they graduate would then start to pay back these at a percentage rate of their income beyond that figure. There is a wide variety of HEIs with 108 providers offering Degrees most of whom will have post graduate offers

including masters and Doctoral programmes (PhDs). Masters and Doctoral are funded by fees but grants are also available from a variety of sources on a case by case basis.

Much of Educational policy can be seen as an attempt to meet the demands of the economy described above. The need for manual and semi-skilled work has diminished to very low levels whilst there are shortages in most specialist areas within the economy; civil engineers, engineers and other scientists, high value ICT work (including creative media elements) doctors, nurses and other clinical professions, those with professional training in financial services, construction and health care. This then requires the teachers to supply these types of training. Students who leave education without these skills will find that there are only opportunities for low skilled, usually service based, roles.

1.5 Local Educational Factors

Young people in Cumbria are faced with higher than average house prices but lower than average earning potential, due largely to the attractiveness of people moving into the area for second homes, retirement, semi-retirement or employment outside of the area. Whilst unemployment is on the national average at 6% of working age much of this is in pockets in West coast towns. The level of unemployment in the Kendal area is almost negligible.

There is a risk of high performing student choosing to leave the area, particularly as there is proportionately little higher education provision. As the job opportunities are either high technical skills or service based it can be difficult for many students to find a suitable professional pathway locally which simultaneously creates the joint threat of low educational ambition and a 'brain drain' of more able students.

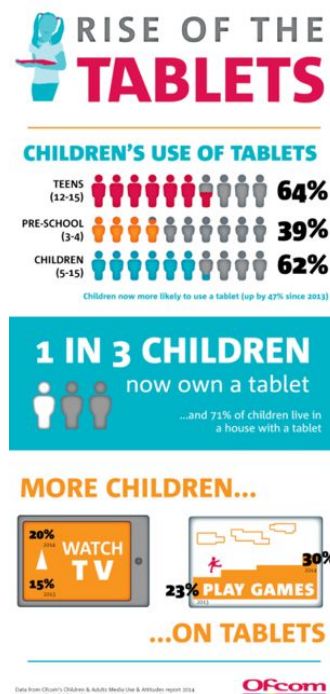
The achievement data below illustrates this as GCSE results (secondary school leavers age 16) are significantly below the national average, whereas A level attainment (the academic post 16 provision at age 18) is significantly higher than the national average.

GCSE Attainment: % pupils achieving 5+ A*-C GCSEs including English and maths				
	2009/10	2010/11	2011/12	2012/13
Cumbria	56%	57%	56%	57%
England	55%	58%	59%	61%

Source: Department for Education

A Level Attainment: Average Pupil Points Score				
	2009/10	2010/11	2011/12	2012/13
Cumbria	755	761	754	734
England	727	728	714	706

Source: Department for Education. Note: Average includes state funded schools only.



2.0 Current ICT situation – Nationally

Children's media access and consumption has increased hugely in recent years within England. Much data is collected on a UK basis and indicates the extent of this and the trends between 2005 and 2015. Nearly all households with children (97%) have an internet connection. There is no specific public policy behind this.

Ofcom report that the amount of time 8-11s and 12-15s spend online has more than doubled from 2005 and 2015, from 4.4 hours a week in 2005 to 11.1 hours in 2015 for 8-11s and from 8 hours to 18.9 for 12-15s. In contrast, time spent watching TV has increased slightly among 8-11s (from 13.2 hours in 2005 to 14.8 hours in 2015) and has remained stable among 12-15s (from 14.7 to 15.5 hours). This overall increase in time spent online was also visible between 2014 and 2015, from an average of 12.5 hours to 13.7 hours a week among 5-15s. The increase is particularly evident among 12-15s, who now spend 18.9 hours a week online, up from 17.2 hours in 2014. This is nearly three and a half hours more than they spend watching television on a TV set (15.5 hours).

Although the proportion of children who go online, either at home or elsewhere, has not increased since 2014, ranging from 39% of 3-4s to almost all 12-15s (98%), it has increased only slightly since 2005 for 12-15s, when 94% used the internet at home or elsewhere. Access at home has increased more substantially. In 2005, 61% of 8-11s and 67% of 12-15s had access to the Internet at home. In 2015 close to nine in ten 8-11s (91%) and nearly all 12-15s (96%) have Internet access at home, either through a fixed broadband connection or through using a mobile network signal. In 2005 less than two-thirds of these home connections were broadband and 21% of 8-11s and 28% of 12-15s still had dial-up.

In 2005 3% of 8-11s and 13% of 12-15s had Internet access in their bedroom. In 2015 this has increased to 15% of 8-11s and 34% of 12-15s who have Internet access via a desktop, laptop or netbook in their bedroom, and many also use portable devices, like tablets and mobiles, to go online.

The number of children who use a tablet has risen to over half (53%) of 3-4s, from 39% in 2014, and 75% of 5-15s, up from 64% in 2014. The increase is evident across all age groups, with the biggest rise among 5-7 year olds, increasing by 15 percentage points to 69%. The number of children who have their own tablet has also increased to one in seven 3-4s (15%, from 11% in 2014) and two in five 5-15s (40%, from 34% in 2014). Tablets are now the most often-used device for going online for all age groups except 12-15s, with half of 3-4s and 5-7s (51% and 49%) and over a third of 8-11s (36%) 'mostly' using a tablet to go online, a significant increase since 2014.

There has also been an increase since 2014 among younger children in playing games on a tablet, rising from 21% in 2014 to 28% for 3-4s, and from 30% to 37% for 5-7s, making this the second most commonly-used device for gaming among 3-4s, 5-7s and 8-11s. Overall, more than half of all 8-11s (52%) and six in ten (60%) 12-15s ever play games online.

The trend towards smaller devices being used also translates to smart phone usage. Half (49%) of 8-11s and eight in ten (82%) 12-15s owned a mobile phone in 2005. In 2015 the total numbers who owned a mobile had fallen to 35% of 8-11s and 77% of 12-15s. However, many mobile phones are now smartphones, which did not exist ten years ago: 24% of 8-11s and 69% of 12-15s now own a smartphone, and the number of 5-15s with a smartphone increased between 2014 and 2015.

Unlike younger children, 12-15s are more likely to own a smartphone than a tablet, and are most likely to use their phones, rather than a tablet, to go online: 34% of 12-15s say they mostly use a mobile to go online, an increase since 2014 (27%). In 2015 traditional TV is being challenged by other types of audio-visual content. Among 12-15s who watch both TV and YouTube content, for the first time more say they prefer to watch YouTube videos (29% vs. 25% in 2014) than TV programs (25% vs. 30% in 2014). There has been no change in the likelihood of having a social media profile since 2014. Among all children, 1% of 3-4s, 2% of 5-7s, 21% of

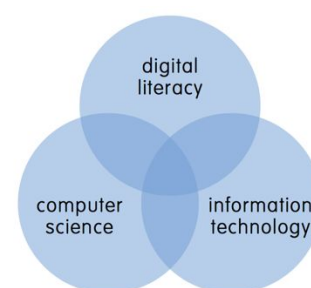
8-11s and 74% of 12-15s have a profile. However, among those with a social media profile, 12-15s are less likely now than in 2014 to say Facebook is their main profile (58% vs. 75%) and are more likely to nominate Snapchat (11% vs. 3%).

‘Critical understanding’ is a way of describing the skills and knowledge children need to understand, question and manage their media environment. This is important if they are to get the benefits it has to offer, and avoid the risks. Critical understanding covers a wide range of knowledge and skills. The following measures around trust and understanding of content provide an indication of the extent to which children possess these skills, and whether this has developed in line with the increasing complexity of the media landscape.

The trend towards increased availability, miniaturization, makes education on critical awareness and digital literacy important however curriculum expectations have not significantly changed over recent years. Curriculum changes have included the inclusion of ‘Prevent’ which is an anti-radicalisation programme which includes an online dimension. Curriculum changes from ICT to Computing have moved the subject towards the economic imperative to produce high technical skills (particularly coding) and attempted to modernize the approach to digital literacy and ICT usage from everyday IT usage and awareness. Online safety and security issues have been seen more as pastoral or safeguarding concerns rather than main curriculum topics.

2.1 General use of ICT in English education

All Schools, Colleges and HEIs in England have computer access and Internet provided by what are, or were public bodies. This drive began in the late 1990s and was completed by 2001 effectively driven by central government funding. Since then there have been no ‘top down’ initiatives to further boost or standardize It provision or infrastructure in any part of the educational sector. Within the Primary and secondary curriculum there is the subject of computing which has 3 elements within it; digital literacy, computer science and information technology. All children will study this up to the age of 14. Beyond that schools must offer the subject to 16 but is only accountable for all students being taught the content described in the diagram on the right;



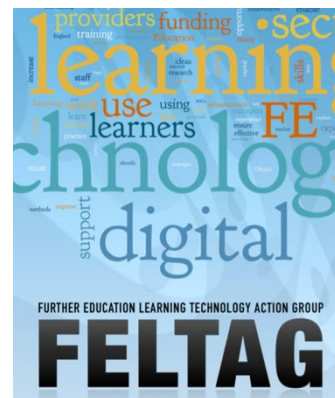
All pupils should be taught to:

- develop their capability, creativity and knowledge in computer science, digital media and information technology
- develop and apply their analytic, problem-solving, design, and computational thinking skills
- understand how changes in technology affect safety, including new ways to protect their online privacy and identity, and how to identify and report a range of concerns.

How this, and other aspects of the curriculum, are delivered is largely devolved to individual institutions. Therefore within the UK educational system there is a rigorous quality check called Ofsted. Ofsted will inspect and publically report on the quality of every school, college or apprenticeship training provider in receipt of government funding (except HEIs). For each area of an educational providers practice there is a varying amount of ‘guidance’ given about how to operate from various bodies. This guidance is not compulsory but ensuring that educational outcomes are met is expected and providers that fail to meet Ofsted’s standards will suffer reputational damage which has a pronounced impact in a quasi-market driven sector and can mean that providers are effectively taken over by outside management teams. Government has reported on a recent trend away from the separate provision of ICT into specialist computer rooms in most schools and colleges who are rather preferring to enrich traditional classrooms with laptop and tablet provision, reflecting the change in the way both children and adults use ICT at home.

Specifically within the College Further Education (FE) Sector, a recent report on Further Education Learning Technology Action Group (FELTAG) made some recommendations about the how ICT can be most effective in promoting teaching and learning. Its key findings included;

- Offer continuous ICT training to teachers
- Digital literacy should be included in professional standards
- Providers should offer 10% of course online
- Good practice should be shared
- Innovation was to be encouraged
- Digital literacy mandatory in Teacher Education



There are no overall guidelines or benchmarks for the type or amount of ICT that should be provided to an individual learner as such the national picture is one of individual schools and Colleges interpreting their own requirements and priorities. The common theme amongst FELTAG and most inspection reports are that ICT use should be developed and the teachers often lacked the up to date knowledge necessary to implement best practice. To that end changes to teacher education programs have been made and each College is accountable to Ofsted on how it has progressed towards effective use of ICT. It is important to add though that Ofsted cannot reach a judgement on solely this basis, or on the basis of 'has a College implemented the FELTAG reports?', they can only make a judgement on the outcomes based common inspection framework.

2.3 Summary

In assessing the educational provision and apparent lack of structural approach it is important to restate quasi-market based educational system, particularly in relation to the autonomous and incorporated post compulsory sector. The driving force behind the effective use of ICT is to increase student satisfaction rates, educational outcomes and retention rates, not as an end in itself. This then means that it's efficacy can be assumed, it should be demonstrable as effective in comparison to any other pedagogical and organisational device.

3.0 State of the Art at Kendal College

This section gives a description of the current situation regarding the infrastructure and pedagogical use of ICT at Kendal College in April 2016. As Kendal College, like other similar provider is not directly associated with County provision there is no regional context to set.

3.1 Infrastructure and hardware

Kendal College has the following inventory;

- 593 desktop PCs
- 105 Macs
- 259 laptops
- 66 tablets
- 208 iPads
- Interactive whiteboards or touchscreen LCDs in every classroom
- 53 smart phones

This equates to approximately 0.8 devices/Full time learner. Though this reduces to 0.5 devices/student if apprentices are included. Around half these spend one day a week at College and the others rarely visit the College campus receiving education in their workplaces delivered by College staff via various delivery methods.

The Macs are almost entirely based at our Creative Arts Campus and most run Adobe Creative suite 6 allowing Creative Arts students access to industry standard software. The PCs are distributed across campuses, with one in each classroom and for each member of staff. The remainder spread between flexible Learning resources center use which learners can access out of class (85 machines) and 10 computer rooms which are timetabled to allow whole group access to machines. Three of these rooms are higher specification machines for computing and Engineering students featuring i7 processors that are capable of running industry standard CAD software and other applications more demanding of processing power.

The 259 laptops and 208 iPads and 66 tablets are shared between some staff and laptop trolleys based in the resource center and some departments that can be booked by tutors on a routine or ad-hoc basis. A few machines are held back for short /medium and long term loans of equipment for students who need them for educational purposes, for example specific access software may be installed for learners with additional needs or a student own machine breaks and this would disadvantage them in the short term before they can source a replacement.

The Smart phones are used by college assessors who are staff member who deliver work based learning to apprentices. They are used as offsite wireless tethers for their laptops and have an app which gives access to the apprentices online portfolio for assessment and feedback.

Internet connection is via JANET at 500M/bits/second which is connected to the University network. We operate Sophus firewall and web filter. Server infrastructure is built on HP equipment, we have 45 servers from 3 hosts and run VMWare. The college data is held and protected by HP storage systems and back up using Veeam. There is a wireless network which all colleges portable devices access.

Additionally Staff and students can bring their own devices and access the Internet via the college network these are logged and filtered if using this facility.

Other equipment includes items as diverse as programmable Sparki robots used in computing, various 3D printers, a digital X-Ray machine, laser cutter/etcher, CNC lathes, saws and milling machines.

3.2 ICT staff

There is a team of 3 network technicians and one digital learning manager. One of the technicians is an apprentice. There are also two tutors who teach on Computing programmes and one who deliver IT user qualifications.

3.3 Software

College Information systems;

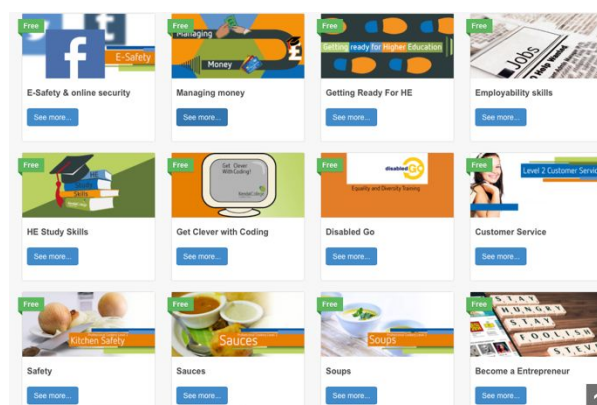
The college information systems are maintained in house using a purchased software package. The package has two main elements used in curriculum delivery and is maintained in house by the College information Systems department (CIS). The administrative side is called ProSolution and keeps learner records, registers, course codes and attendance information etc. This is then linked to the College website so that courses can be advertised and searched for (there is a lot of part time provision).

Some data in ProSolution is migrated to the academic management and progress tracking element of the package – ProMonitor. This allows teaching staff and students to track academic records of progress. It records targets that are set for the students, tutorial and other meetings and key elements of students time at the college to shared and archived (eg disciplinary proceedings, pastoral records). Students are given access to their academic progress, attendance data, targets, and meetings they have attended via their college login to ProPortal. This can be accessed off site at any time by staff and students.



Virtual Learning Environments;

All students have access to a Virtual learning environment (VLE) for their department or course. On it they can access course materials, assessment titles and deadlines, course handbook and their outline Schemes of work that they will be following. The VLEs are developed in house using the Wordpress platform. This allows some departments, particularly in the Creative arts subjects, to expect students to blog their responses to course work. This blog is then used as their coursework for assessment purposes. These blogs and VLEs can be accessed anytime on or off site and are linked from a central site called the Hub. The Hub is hosted internally on College servers.



E-learning;

Partially in response to the FELTAG report and also driven by a desire to enrich our learners experience beyond the classroom the College developed by our 'creative team' to both write and 'package' existing material as e learning courses.

These are made available to all students. Some students are expected to complete some of the course as part of their programme of study at the College. For example students hoping to progress to HE will take the HE study skills course, and those hoping to be employed will take the 'employability skills' course.

E-mail and word processing;

Microsoft Outlook is used as the official E-post platform for both teaching and administrative staff. Office 365 was introduced in summer 2015 for all students and staff. Prior to this the students and staff had access to Office 2011.

Subject-specific software;

Creative arts students use Creative Suite 6, as do computing courses

Engineering use the CAD packages SolidWorks and Illustrator

There is a wide variety of Access promoting packages used in learning services

3.4 Development of competency

Monitoring of teachers' skills and training needs:

All teachers have use of ICT set as one of their performance management targets. This is monitored via teaching observations both in a formal cycle and walkthroughs of classes by management. If an area of development regarding ICT is picked up that staff member would be expected to seek professional development

Learners are asked via questionnaires at the start and end of their course a variety of questions which includes element on ICT in the classroom and VLE, ProPortal use to gauge how effective they think it has been

Staff training (formal):

During both the level 4 and PGCE teaching qualifications taught at the College trainees complete skills scans relating to ICT and produce a development plan.

There is a College ICT forum which meets regularly to discuss ways to promote teaching and learning via the use of ICT. This has been relaunched recently following the appointment of a Digital learning manager which replaces the post of 'Network manager'.

Staff training (informal):

Team meetings and departmental meetings and our CPD bitesize are also used for staff training. In consultation with the team different courses are offered internally eg. 'using office 365' or 'Plickers – how does it work?'.

3.5 Summary

- A. Learner experience of ICT at College is patchy, dependent on the tutors they have
- B. Some learners have a very rich use of ICT on their programs
- C. There has been no holistic plan to develop ICT at the College, but CIS, teaching and learning and network team
- D. Good practice in some department/tutors needs to be disseminated more effectively across college
- E. There needs to be further consideration of what is really effective to focus time and resource onto those areas

Strengths	Weaknesses
<ul style="list-style-type: none"> ● Good hardware and network infrastructure including BYOD after recent investment ● Some very innovative teaching and learning observed in classrooms ● Some excellent use of blogs for effective and accessible assessment ● Effective use of ProMonitor/Proportal to track learners and allow them visibility of this ● E-learning packages produced in house to enrich student experience 	<ul style="list-style-type: none"> ● Some departments have underdeveloped VLEs ● Some teaching staff are not familiar with web 2.0 technologies ● Tracking and monitoring of E-learning progress is underdeveloped ● CPD sessions are not always well attended ● Social media is underutilised in teaching and learning ● Pedagogical use if ICT and network/hardware issues have been too disparate in the past
Possibilities	Obstacles
<ul style="list-style-type: none"> ● Using web 2.0 to explore cross cultural learning ● Using web 2.0 to facilitate pedagogical innovation ● Flipped classrooms ● Enhancing learner motivation 	<ul style="list-style-type: none"> ● Long 'learning time' to implement new ideas is difficult to generate for teachers ● Access to some hardware not readily available ● Balancing pedagogical use of mobile devices and monitoring student behavior

Sources:

https://www.ofcom.org.uk/_data/assets/pdf_file/0024/78513/childrens_parents_nov2015.pdf?lang=cym
researchbriefings.files.parliament.uk/documents/SN06705/SN06705.pdf.

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researchbriefings.files.parliament.uk/documents/SN06113/SN06113.pdf