INSIDE

BEHIND THE SCENES
... on results day

REFLECTIONS ON THE FUTURE
Interview with former Eton head Tony Little

REGIONAL VIEWPOINT
Cambridge in Italy

IN FOCUS

Education fit for the future

How we’re all evolving to keep up with changes in education
Cambridge International Examinations prepares school students for life, helping them develop an informed curiosity and a lasting passion for learning. We are part of Cambridge Assessment, a department of the University of Cambridge.

Our programmes and qualifications

Cambridge Primary
Cambridge Primary develops learners’ skills and understanding through the primary years in English, mathematics and science. Many schools use Cambridge Primary Checkpoint tests to measure learners’ performance at the end of primary education.

Cambridge Secondary 1
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Cambridge Secondary 2 develops skills in enquiry, creative thinking and problem solving, giving learners excellent preparation for the next stage of education. There are two assessment options: Cambridge IGCSE or Cambridge O Level. Both are globally recognised qualifications.

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Cambridge Advanced is for learners who need advanced study to prepare for university and higher education. This stage includes Cambridge International AS & A Level and Cambridge Pre-U qualifications, providing learners with a passport to success at university and in employment.

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If there’s one thing we’ve learnt from writing this issue, it’s that Cambridge schools always have one eye on the future. Whether it’s building bright new campuses (page 8), devising an evolutionary strategy for your school (page 13), or simply preparing students to achieve far beyond traditional expectations (page 18), you never seem to stand still.

At Cambridge, we provide programmes, assessments, resources and events that help you to give students the best preparation for their future lives. Many of you will be discussing ‘Education fit for the future’ at this year’s Cambridge Schools Conferences in Cambridge and Dubai. Our new blog, coming soon, will be another forum to share best practice and innovation. And, of course, the pages of Cambridge Outlook are packed with tools and ideas to help keep you at the forefront of your profession. If you have any ideas to share, please email us at outlook@cie.org.uk

Michael O’Sullivan
Chief Executive
Cambridge International Examinations

Find out more...
Read about all our education programmes and qualifications at www.cie.org.uk
Get the latest news sent to you every month with Cambridge Outlook eNews – sign up to receive the eNewsletter at www.cie.org.uk/newsletters

Follow our code
Look out for these colours throughout this magazine – they will help you to easily identify the Cambridge education stages that you want to read about.
North Carolina reach is extended
Our programmes get a boost in the United States

Cambridge's presence in the USA advanced significantly as six schools in the Charlotte-Mecklenburg Schools (CMS) district in North Carolina announced their adoption of Cambridge programmes.

The six schools, all in the North Learning Community, will join more than 300 others in the US providing Cambridge qualifications. The programmes will be rolled out gradually, with Cambridge syllabuses being offered to students in Grades 4–12 by the end of 2018.

Ann Clark, superintendent of Charlotte-Mecklenburg Schools, said: “Adopting these programmes reflects our strong belief that setting high academic standards and developing our students as independent thinkers creates a greater opportunity for future success in college and in their careers.” More than 470 colleges and universities across the US recognise Cambridge International AS & A Levels for credit, placement and admissions.

“Increasingly schools want a curriculum that inspires and challenges children to learn. Children are often bored by too heavy a focus on tests and grades, but real learning and independent thinking draw them in,” said Sherry Reach, Deputy Regional Director of North America for Cambridge.

The decision to offer the Cambridge curriculum delighted parents, who had first brought Cambridge programmes to the attention of education officials.

New look for Cambridge Global Perspectives® online

In response to your feedback, we’ve made improvements to the Cambridge Global Perspectives online learning area.

You told us that the most-used elements are teaching resources (81 per cent) and online courses (50 per cent). Some 35 per cent of you said usability and navigation could be improved, and 18 per cent asked for more resources.

So, our redesigned homepage has improved navigation. And the platform now works on desktop and tablet devices. There are also new areas for teachers and learners.

So log in at learning.cie.org.uk to see the changes for yourself.

WHAT YOU THINK OF US
Our latest customer satisfaction survey has produced overall positive results – but of course we can always improve. We run the survey after every exam series.

More than four out of five exams officers and teachers reported high levels of satisfaction. Our telephone support was also highly rated, although figures were down slightly on the same period last year.

Demand for this service has increased over the past couple of years, and we are increasing capacity (see page 25 for a behind-the-scenes look at our customer service operations).

Almost all of our international schools said they would recommend us – thank you for the vote of confidence. We will continue to improve our support and communications to schools.

AND WHAT ARE YOUR VIEWS ON CAMBRIDGE OUTLOOK?
Does this magazine do everything you think it should? How could we make it better? Tell us by filling out our online survey at www.cie.org.uk/outlooksurvey
Global round-up

What’s happening in the world of international education

● New educational gender gaps are opening up in Organisation for Economic Co-operation and Development (OECD) countries, according to an OECD report1 that analysed results from the Programme for International Student Assessment. Young men are more likely than young women to think that school is a waste of time and to have low skill levels. The report also found that self-confidence in maths is key to doing well in the subject. Girls are more likely to feel anxious about it, which affects their performance: when the report compared boys and girls with similar levels of self-confidence the gender gap in performance disappeared.

● Thirty-seven countries have signed the Safe Schools Declaration, an international commitment to protect schools and universities from attack and military use during conflict. This is the result of a process initiated by the Global Coalition to Protect Education from Attack in 2012, and led by the governments of Norway and Argentina since 2014. Afghanistan, Côte D’Ivoire, Nigeria and Palestine are among the signatories. By signing up, the countries agree to implement new guidelines on protecting schools and universities from military use, and to collect reliable data on attacks on educational facilities.

● There will be an annual financing gap of US$22 billion between 2015 and 2030 for reaching targets set by UNESCO for good-quality education in low and lower middle income countries. A policy paper2 from UNESCO’s Education for All Global Monitoring Report says government spending must rise, as must donor aid, to cover the shortfall. It also points out that, while the gap may appear large, it is equal to just 4.5 days of annual global military expenditure.

● The number of students around the world enrolled in English-medium schools has reached four million – up from 2.75 million five years ago, and just one million 15 years ago. The annual report from The International School Consultancy3 found that the country with the highest number of students at international schools is the United Arab Emirates, with 479 700 students at 514 schools. China has the largest number of schools, however – 530 – but only 326 400 students enrolled.

A NEW BLOG FOR THE WORLD OF CAMBRIDGE

Look out for our new blog on our website, launching in mid-September. Cambridge staff from around the world will be sharing their knowledge and expertise on a host of topics, from curriculum and assessment through to teaching methods and professional development.

It’s designed to encourage discussion and debate, so we hope you will find it a valuable resource.

See future issues of Cambridge Outlook eNews for more details.

LEARN • DISCOVER • ACHIEVE

You’ll see from our logo on the cover of Cambridge Outlook magazine that we have replaced our ‘Excellence in Education’ strapline with ‘Learn • Discover • Achieve’, following research with students, parents and schools. Our new strapline describes the journey Cambridge students take as they grow and develop throughout their education. It reinforces our goal of preparing students for life.

Michael O’Sullivan, Chief Executive of Cambridge International Examinations, said: “As an organisation we are always looking forward. ‘Learn • Discover • Achieve’ reflects our commitment to helping students to reach their potential. Cambridge will always stand for excellence, but our new strapline says more about our educational values.”

WHAT TO EXPECT FROM EXAMS

There are a few things students need to know before they enter the exam room – so we’ve created a short video to remind them of etiquette and what to bring. Watch the video at: www.cie.org.uk/examvideo

One thing we can be sure of in the future is that there will be profound changes to the way we all work. The articles that follow in the ‘In Focus’ section of this issue of Cambridge Outlook give us a number of important perspectives on ‘Education fit for the future’ – which is also the theme of this year’s Cambridge Schools Conferences. Computer-based testing will replace pen and paper, technology will continue to provide new ways to improve and share learning, and schools will fundamentally change the way they look and operate.

It is very important to be proactive in the face of change rather than reactive to it. The first step is to evaluate what really matters to ensure that change improves teaching, learning and assessment. Some schools, for example, have introduced technology into the classroom without thoroughly thinking through precisely how it will be used. In his article on the facing page, Daniel Edwards makes an important point when he states, “Every new piece of technology I bring into my school is the result of a teaching and learning decision.”

We cannot afford to be complacent in the face of change and, as teaching and learning decisions are continuously made by teachers in the classroom, the role of teachers in leading the learning process has never been more important. Effective teachers in the future will need to be lifelong learners who constantly evaluate and adapt their own practice. They should be innovative in trying new approaches and technologies and reflective in evaluating the impact. If it does not work well then practice needs to evolve until it does.

In the information age students can, of course, access knowledge and information much more easily. But this is not the same as understanding it. With an abundance of information around, helping students learn how to evaluate, manipulate and apply knowledge has become even more important. This requires teachers to be subject experts who understand the deep structure of their discipline and model expert thinking. As Phil Kirkman points out in his article on page eight: “The role of the teacher in this flexible, reflective learning world is that of an expert... they are practising their subject, not just teaching it.”

Despite all the technology, humans remain a social species, and empathy, communication,
working collaboratively, wisdom in decision making and morality have never been more important. Schools, in harmony with their communities, must take the responsibility for these broader curriculum aims, recognising that what matters in schools is not just the grades students receive, but their own personal development.

We have a particular responsibility at Cambridge to ensure decisions about how best to support and judge student learning through assessment are led by good practice rather than just what is technologically possible. In this we will be guided by the principles of validity (assessment is fit for purpose and measures what it intends to measure), and reliability (ensuring that all results are consistently precise, accurate and fair). We will look at ways that technology can improve the richness of assessment – as a tool for supporting learning and judging performance – and not just replace paper and pen.

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“Every new piece of tech I bring into my school is the result of a teaching and learning decision and not just because it’s an exciting new piece of kit. The technology must have a positive impact on the learning process. I also ask ‘is it intuitive?’ and then ‘could our 11-year-olds use it?’ Eleven-year-olds are very good at giving honest feedback so I let these digital leaders try out the new technology/apps first. If it works for them, I’ll then take it to digital leaders (student representatives) in other years, let them trial it and we build a feedback document in Google Docs. Then we make a decision on whether to adopt it.

The decision is based on three principles. Firstly, I look at seamless access to content: teachers are in the lucky position now to be able to curate and create resources through technology to allow the students to access them when required.

Secondly, the technology should remove barriers to learning. It should allow teachers to give feedback that is immediately accessible to the student, making lessons a contact point as part of the continual learning process.

Thirdly, it needs to allow teachers to get on with what they are great at: asking great questions and answering great questions.

What we are really trying to do is close the feedback loop, making learning a constant conversation between student and teacher.

Daniel Edwards is director of digital learning at the Stephen Perse Foundation in Cambridge, UK
hat does a classroom ‘fit for the future’ look like? Ask any teacher or student and they will give you a personal and unique view on this (see ‘The students’ view’, right). It is a question without a correct answer, perhaps, but we can identify some common traits of excellent learning environments.

Dr Phil Kirkman is a Teaching Associate in Pedagogy, Language, Arts, Culture and Education at the University of Cambridge, UK. His research interests span educational anthropology and the relationship between educational development, identity, and student and teacher voice. His view of exemplary learning environments that are fit for the future are those that are characterised by a flexible range of pedagogical resources, including different sorts of technology, where knowledge and skills combine and where students can take an active role in their own learning.

“Students in these environments have a sense of ownership of their learning, rather than it being imposed on them by an unknown power or hierarchical structure. No arbitrary limits are placed on them through labelling, ability grading or by restricting access to certain kinds of exams. They are reflective, by which I mean teachers and learners share their failures and successes in a spirit of open and honest inquiry,” Phil says.

But there’s no one way to achieve this, he adds. “What that might look like in different cultures I imagine would be quite different.”

The role of the teacher in this flexible, reflective
learning world is that of an expert: mathematician rather than maths teacher, musician rather than music teacher. They are practising their subject, not only teaching it.

“So by talking with a scientist, for example, students become scientists themselves. They learn to think about their subject with other people and accomplish things for themselves,” Phil says.

So is this the beginning of the end for the traditional classroom? Not completely, says Phil: “The sorts of walls that allow you to construct a well defined space that stimulates students are quite useful. The key thing is that it is a safe place where learners come together and where their educational needs are met. There’s a lot of strength to a physical learning space, overseen by teachers who can help to keep students on the right learning track.”

However, some schools are in the happy position of being able to mould their learning environments around the needs of their students through large-scale rebuilding projects. Take a look overleaf to find out how GEMS Wellington Academy in Dubai and St Andrew’s Scots School in Buenos Aires, Argentina, are creating learning environments fit for their schools’ future.

The students’ view: what will the classroom of the future look like?

There are some great advances in, for example, 3D printing, which could be used in biology or chemistry or even geography. But in terms of the actual classroom and how we interact with each other, I think that the future classroom will be more enriched by different cultures and a place where we can appreciate each other and also learn from each other.

Toby Delgrado

I see the future classroom becoming more technologically advanced, but in fact I would like to see a classroom which is more books-orientated. There are some valuable skills learned through books and through paper research methods – not just via computers – so it’s very important to have both.

Isha Ali

I see the future classroom as one in which the kids are involved constantly with teaching and learning. It will be a dynamic class in which there is always debate and the teacher is always trying to teach their students in a dynamic and interesting way. I think it will be a world in which students will enjoy their classes more.

Carolina González Guereño

Mostly computers, mostly smart boards, all technology. It’s interesting to have that type of classroom because when you’re presenting a project you get feedback from students and the teacher straight away, instead of a teacher standing up there giving you traditional notes.

Molly Brenner

Thanks to students at Suffern High School, New York, USA, and St George’s College and Colegio San Antonio, Argentina

Qualification: teaching with technology

Cambridge offers a Certificate and Diploma in Teaching with Digital Technologies. To find out more, visit www.cie.org.uk/pdq
CASE STUDIES

**Silicon Oasis GEMS Wellington Academy, Dubai, UAE**

Silicon Oasis GEMS Wellington Academy in Dubai is one of the most futuristic schools you could encounter. It has teachers delivering lessons from hundreds of miles away, long periods that allow students to learn across several topic areas, a ‘learning plaza’ instead of classrooms – and robots patrolling the school campus.

Admittedly, this last claim is an exaggeration. The school does have one robot, though. It looks little more than a screen on wheels, but it enables a user to connect to it and move around the school remotely, and was most recently used by a teacher to take a class from home.

Stephen Sharples, Secondary Principal at the school, says it was given to the school by its manufacturer to try out and feed back on, but it ended up staying for good. He adds: “It’s the easiest way to showcase what we are about as a school in terms of our culture and innovation.” Plus, he says, visitors love it.

Robots aside, the school uses technology to deliver a curriculum far more diverse than it would be able to otherwise. For example, one biology course is taught via video link by a teacher based in Switzerland. New students whose first language is not English (about half) go through a bespoke, online language programme before they enter the school. The students’ progress is monitored by the school and parents, and within four to eight weeks almost all are prepared to enter the English-medium curriculum.

So what’s wrong with having teachers physically present among the students? Nothing, says Stephen. “Students choose to come to the Academy to do the things they can’t do at home: interact with their peers, access the experience and the knowledge of a teacher, access resources such as a science lab, play sports. We provide that learning environment. We then look at ways in which we leverage technology to broaden the offer we give to students, and to reflect the way people live today.”

Stephen’s ambition over the next couple of years is to introduce more freedom within learning periods. “The Academy will soon be a place where students can choose what, how and when to learn, and – to some degree – with whom.”

**St Andrew’s Scots School, Buenos Aires, Argentina**

“There are so many different ideas out there in education, but many schools are facing physical, mental or structural constraints in carrying them forward. So when you are forced to rethink your physical layout – as we are with our new building project – you can take advantage of this to implement some of the ideas that are otherwise harder to bring to reality.”

Gabriel Rshaid is describing the rationale – both practical and intellectual – behind the development of a new school building at St Andrew’s Scots School in Buenos Aires, Argentina, where he is principal. “We think it’s a wonderful catalyst. The learning spaces will no longer be exclusive to each teacher, but rather they’ll all be physically transparent. It will be a large common space where there will be, on the one hand, specialised facilities, equipment and
installations and, on the other hand, teachers able to focus on certain aspects of their own development.”

He explains that teachers will work together to divide the learning process among themselves according to their ability, expertise and what they’re passionate about. “So it’s a way to break away from the isolation of a classroom, both physically and in terms of the teaching and learning process,” he says.

The design of this new learning environment is still in progress, as is the fundraising for it. But Gabriel evidently sees it as an exciting opportunity to completely transform the way students learn.

“If we want to generate critical thinkers, people who are creative, who can express themselves using multimedia, the key factor for me is to make the school accountable for that. In this building students will be able to work collaboratively, be creative and work independently, but we also need to say ‘this is what we stand for’. This new development will give us a chance to do everything we’ve been talking about for years.”

**Business partners**

How can industry and schools work together to create a successful, diverse economy?

Education is a balancing act when it comes to preparing students for life after study. On the one hand, they should be free to pursue academic avenues that interest them; on the other, they need to be prepared for the job market.

But the two needn’t be mutually exclusive. In Singapore, for example, an organisation called The Keys Academy brings together companies and secondary students in an ‘externship’ programme where companies present real-life projects to students, using them as a source of expertise and ideas. The students in turn get to put their learning into practice.

Co-founder and CEO Ayesha Khanna says: “It can be a struggle for schools to form relationships with companies because they don’t have the contacts, so we’ve tried to build a new kind of partnership between academia and industry.”

She refutes the suggestion that such an exercise is simply conditioning students to fit into corporate culture. “We take imagination, whimsy, being awestruck, all of those wonderful things that we associate with the humanities, and merge them with technology. Innovation happens only in such circumstances. Partnering students with companies is just a matching of imagination to a problem.”

Ayesha believes that it’s up to governments to bring industry and academia closer together. “If we want a truly diverse and innovative economy, we need people from all kinds of backgrounds. And that has a lot to do with teacher training and bringing people into schools who are already in industry – it’s there that governments can help.”

**‘It’s up to today’s students to create the ideal future’**

Rabia Hilal Sener, IGCSE student at Bilkent Erzurum Laboratory School, Turkey

“Children must be taught how to think, not what to think,” said the anthropologist Margaret Mead. In 2015, science, literature and language courses are offered to teenagers across the world. But does today’s curriculum really teach children how to think?

Let’s visit a high school in 2065. In a science lesson, each student has his or her own minilab: they are discovering for themselves by observing, evaluating and analysing what we in 2015 learn theoretically. Literature and language lessons encourage international-mindedness. Children are taught to interpret a literary piece instead of learning how poetry and prose are interpreted by the experts.

Most importantly, they are aware of the fact that what they learn is for the betterment of Earth, and not just for passing exams and graduating from school. Children in 2065 have awareness of their environment through courses about environmental consciousness, ecology and global warming.

Back in 2015, we high school students need to understand that the small steps of ordinary people create real change and help us to create the ideal future.
in Focus | Education Fit for the Future

Why it pays to plan ahead

How do you direct the evolution of your school? We asked Kevin Ruth, an education strategy expert, for his advice.

Taking control of your school’s future is no easy task, according to Kevin Ruth, Executive Director of ECIS, the professional learning organisation and consultancy for international education. Rather than get bogged down in the notion of being ‘strategic,’ a term that Kevin says is rarely understood and grossly overused, schools ought to be ‘intentional about stewarding their evolution’.

“Strategy is what schools should create in response to an obstacle or a challenge,” he says. “An evolutionary plan, however, is a better term for what we often see, because it is really about the stewardship of the ethos of the school. At its heart, it serves to establish and align the accountability of the school with the expectations of its community to ensure success.”

So how do you create an effective evolutionary plan? Kevin suggests five steps:

1. **Understand who you are in your present context**
   Typically you would start with an analysis of strengths, weaknesses, opportunities and threats, and use surveys and focus groups to identify the salient issues the school is facing. This exercise provides an opportunity to affirm and distil who you are from a mission perspective.

2. **Identify key areas for future success**
   You could do this within step one. Examples of these might be to have a faculty that is better compensated or has increased access to professional development.

3. **Affirmation**
   An evolutionary plan relies on the engagement and even the consensus of your school community, so the next step is to share the areas you have identified in step two. There could be some disagreement here. Don’t be surprised if you need to go back through steps one and two to reach agreement.

4. **Detail**
   Work out your plan of action. Identify the benchmarks and actions required, including the establishment of key performance indicators, the people responsible and a timeframe.

5. **Launch**
   Execution is everything. The danger is that the plan is launched, the school then experiences financial difficulty or competition, and the plan sits on a shelf and loses any potency it may have had.

When a school makes changes, there will always be challenges, so the key to making your evolutionary plan work is to adjust as necessary – not adhere myopically to the timeline – and be always biased toward action.

‘Our strategic vision won’t happen overnight, but it will happen’

Step by Step School in Noida, near New Delhi in India, has a strategic evolutionary plan that not only directs the ethos of the school, but also attempts to revolutionise education practice across the country.

The school opened in 2008, after 18 months of planning. The leadership team tells Outlook: “We are unusual in terms of our strategic plan. Ten per cent of our students are differently abled, and we are among the first schools in India to start a vocational training programme for young adults with special educational needs.”

During the planning phase, the leadership team identified five critical threads to the school’s DNA: teaching and learning; professional development; a rich strand of programmes in the arts and physical education; IT; and parental engagement.

The school’s Centre for Learning and Teaching (CLT) opened five years later, in 2013, although it was part of the original strategic planning. It was conceived as a centre of excellence not just for Step By Step teachers but, eventually, also for the wider education community.

According to the leadership team: “We have the vision, but the reality is tougher. Schools on the subcontinent traditionally don’t share good practice. But we are slowly trying to create a community of educators.”

The landscape is changing though, says the team, pointing out recent invitations from other schools to help them develop their training – a separate space and resources have been set aside for this. “Our strategic vision won’t happen overnight, but it will happen.”

Students at Step by Step School, where a strong programme of performing arts is one of the key features

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Why do we assess our students? A straightforward question with a straightforward answer, surely: it’s to check that they have learnt everything they should have learnt.

But this answer belies the complexity of the educational landscape in the 21st century, where ‘everything a student should learn’ encompasses confidence, social responsibility, analytical skills, self-respect, sound judgment, initiative – and numerous other attributes.

Gordon Stobart, Emeritus Professor of Education at the Institute of Education, University of London, says: “Look up the goals of education in any developed nation and you will get a similar story – they want an educated workforce that can respond to the demands of the 21st-century global market.”

The challenge
The first challenge for assessment is to find a way to judge how well students are able to demonstrate understanding and the ability to apply the facts they have learnt. “To me, the best assessment looks at whether students can make sense of material, have opinions and think critically,” Gordon says.

“Assessment is about students asking ‘how do I write a logical argument?’, ‘how do I take unfamiliar material and make sense of it?’, ‘how do I use my comprehension skills?’ There’s a place for assessing the retention of content too, but it’s the interaction between the content and the skills that is important.”

This balance is test enough in itself for most examination and assessment providers, but a further challenge is thrown into the mix when the purpose of assessment gets blurred by, what Gordon describes as, the driving up standards agenda. This is where assessment results are used to hold schools accountable to parents, governments and wider society, and where league tables are used to try to push up educational standards.

“This is a misuse of assessment,” Gordon says. “Education systems do need to be held accountable, but a broader picture is needed, one that looks at teacher judgment, social skills and students’ collaborative work too.”

This is a view also held by Michael O’Sullivan, Chief Executive of Cambridge International Examinations. Sometimes the same examination is used for too many different purposes: for evaluating students, for making selection, for evaluating teachers and schools,” he said in a speech at the 2015 Beijing Education Supervision and Evaluation Seminar.

Leaving the ‘standards agenda’ aside, however, how does an organisation such as Cambridge create assessments that prepare students for a future in the global employment market?

Testing times
As the demands of learning and teaching evolve in the 21st century, assessment must be robust, flexible and challenging enough to give teachers and employers an accurate view of students’ achievements. We explore what examinations of the future might look like.
The Cambridge way
Roderic Gillespie, Director of Assessment at Cambridge International Examinations, says: “Assessment is part of the trinity: learning, teaching and assessment. You can’t separate them.”

Any good assessment, he stresses, must start with good learning. “Assessors should ask themselves ‘what is the knowledge base I am trying to examine? What is the level of understanding required? What are the skills that need to be demonstrated?’ Our learners need good conceptual understanding and high-level cognitive skills. As you move the focus from knowledge to understanding to high-level skills, the challenge of developing effective, robust and valid assessments increases.”

Consider the development of a physics exam, for example, says Roderic. “I would start by asking ‘what does it look like to be good at physics?’ It’s about observing and investigating the physical world. Students also need to know how to test laws and theories of physics. But this is not enough. We need our learners to also think about the questions they should be asking in the first place.”

Another challenge for Roderic and his team is that young people are learning differently, and potentially faster, than ever before. “This changes how students access and handle data, assimilate and present information, problem-solve and reach decisions. Cognitive processes are changing because students receive information in wider ways than just from the classroom and books.”

Evidence from best practice and research will help guide the development of Cambridge exams and what they look like. “I am always looking for better ways of assessing,” Roderic says.

Computer-based testing and Cambridge
Cambridge will soon be conducting trials of computer-based tests. Helen Eccles, Director of Development, answers a few common questions:

Q. What kind of computer-based testing (CBT) will Cambridge be trying out?
A. We’ll be trialling CBT for Cambridge International A Level subjects which have extended writing responses (essay answers). We feel CBT is a more valid way of assessing these types of subjects, and trials before we go live will help show this. Whatever field of work students go into they are unlikely to be asked to write a three-hour essay, so we are trying to make sure assessments reflect real life.

Q. Will all Cambridge schools have to do them?
A. No. We are trialling this with a view to offering computer-based tests as an alternative form of assessment to schools that wish to use them.

Q. How are they marked?
A. In the same way as the paper tests are marked now. We already scan scripts so examiners can mark them on screen – this won’t change, except the examiners will have typed answers, rather than handwritten ones.

Q. If students are taking exams at computers, won’t they be able to use the internet to cheat?
A. No. The test software locks down the computer during the exam.

Q. Are they secure?
A. Yes. The exams are encrypted and automatically unlocked by Cambridge shortly before students sit them.

Q. Will all exams be computer-based in the future?
A. Not as far as I can tell. The trend is for everything to be done on computers. However, we’re aware of the practicalities of exam-taking. Not all schools have a computer for every student, so there needs to be a variety of exam methods that schools can choose from. This will be a slow evolution.
Reflections on the future

Tony Little, until very recently the headmaster of Eton College in England, speaks to Cambridge Outlook magazine shortly after moving back to his family home in Norfolk, in the east of England. “This is the first time in about 30 years my wife and I have actually lived in our own home and not in a school,” he says. “There were some very nice, poignant moments towards the end of my time at Eton with the pupils – but it feels right to move on now.”

For 13 years Tony presided over one of the world’s most famous schools. And while he is obviously hugely affectionate of the institution, the pupils and the staff, he has little desire to dwell on the past. He is resolutely forward-looking, an ethos that extends to his biggest legacy at Eton, the new Tony Little Centre for Innovation and Research in Learning. It sits at the heart of the school campus and focuses on research into neuroscience, technology and teaching, involving not only students and teaching staff at Eton but the wider educational community too. For example, it is already undertaking research projects with Reading University.

He says: “I wanted to create a building that’s both a physical fact – it’s in the middle of the school campus and you have to pass it every day – but has a symbolic value too. You can’t escape it, it’s part of life here: it’s a way of experimenting, testing, engaging young people in their learning.”

The inspiration behind this centre came from education models from other countries, in particular Finland. “What really strikes me as distinctive about the Finnish approach is the emphasis on continued professional development of teachers all career long. It’s not something they buy into because it might be nice, but it is considered normal. In the UK, teachers are our biggest resource in education – but often the resource that is most underplayed.”

Put simply, Tony advocates the empowerment of teachers to be good at their jobs. “Teachers nowadays have to be much more professionally competent than in the past. They have got to have

Curriculum Vitae

Tony is an Eton boy himself, attending between 1967 and 1972. He went on to Corpus Christi College, Cambridge, to study English and then did his teacher training at Homerton College, Cambridge. Before becoming headmaster of Eton in 2002, he was headmaster of Oakham School and, before that, of Chigwell School. He now lives in Norfolk with his wife. His book, An Intelligent Person’s Guide to Education, is out now.

Above: Eton College, where Tony Little (below) was headmaster for 13 years

“ Teachers nowadays have to be much more professionally competent than in the past”
a wider repertoire of teaching methods at their disposal in order to be able to adapt to the needs of the students. That would have been completely alien when I started teaching in the 1970s. We’re now beginning to see signs of teachers being less evident as the centre point of a classroom. And that absolutely is going to be the way of the future – particularly with the rise of technologies.”

If such futuristic talk seems strange coming from the head of such a conservative, old-fashioned institution, that’s because Tony does not see Eton in those terms. “Eton exists on two levels,” he says. “It’s a four-letter generic descriptor for a private boarding school on the one hand – and on the other hand it’s a real, living place. The two often feel very different. The notion that Eton has a formulaic, old-fashioned, heads-down-at-the-desk kind of approach to learning is just not what happens here. That view is at least a generation out of date.”

So what next for Tony himself? In terms of his own career, he is also resolutely forward-looking. He will become chief education officer of Dubai-based GEMS Education in September 2015. He has agreed to take on the role of honorary president of the UK Boarding Schools Association. And he plans to stay involved with Eton’s Centre for Innovation and Research in Learning, but ‘at one remove’. He adds: “Anyone who’s been a headteacher will understand this exactly – once a headteacher goes, he or she should go!”

Tony Little is speaking on ‘Reflections on the past, present and future of education’ at this year’s Cambridge Schools Conferences in Cambridge, UK, and Dubai, UAE
HEN NONHLANHLA MASINA arrived at Wits University, Johannesburg, armed with a Carnegie Bale Women’s Scholarship to study science, she quickly discovered that despite matriculating top of her class, the education she’d received in her township, Tsakane, had not served her well. “I started at maybe a two- or three-year difference to my peer group,” says Nonhlanhla, who initially didn’t even know how to turn on a computer.

She signed up for additional tutorials and language classes and she doggedly acquired the skills and knowledge required to succeed. She now has her Master’s in pharmaceutics and, in January 2013, she founded the African School of Excellence (ASE) in Tsakane, with co-founder Jay Kloppenberg, the school’s CEO, to improve the opportunities of future generations. Nonhlanhla is now the school’s development officer.

“We want everyone who comes to our school to have their lives transformed. So where you would be a gas station attendant, now you’d be a scientist,” says Jay, a former management consultant.

ASE is already pointing its students, or ‘scholars’ as the school prefers, in the right direction. Children arrive at the school in Grade 7 (around 12 years of age), reading at around a Grade 3 (7-year-old) level, says Jay, but an intensive Cambridge curriculum focusing primarily on maths and English ensures that they catch up impressively quickly.

When the new Grade 7 scholars first started Cambridge Primary Checkpoint in 2014, none of them achieved Level 4. After nine months, 99 per cent, 97 per cent and 100 per cent achieved the grade in mathematics, reading and writing respectively.

ASE chose the Cambridge curriculum for three reasons, says Jay. “Cambridge is particularly well accepted around the world. It also has rigour: Cambridge is more challenging than the South African curriculum. In the first year at top South African universities, there is a 40 per cent drop-out rate due to a lack of academic preparation. We want our scholars to be prepared to succeed wherever they go – not just to get in. Working at this higher level allows them to develop the thinking skills, leadership skills, and the reading and writing in order to succeed.

But the third – and most crucial – factor, says Jay, was flexibility. “The fact that the Cambridge curriculum doesn’t say, ‘this is what you have to do in Grade 7 or Grade 8’ or ‘you have to do this module at this time’…there are fewer rules. Children come to us reading at a third grade level and we want to get them to a place where they are graduating from us at

“We want our scholars to be prepared to succeed at whatever university they go to – not just to get in”

– Jay Kloppenberg, CEO

Students at ASE are expected to quickly reach a high standard of reading, writing and maths, no matter what their starting point.
a university level – really rapid progress. We have to experiment and see what works. And Cambridge provides the most flexibility of any system we looked at.”

ASE survives on corporate and individual donations, plus a contribution of 200 Rand (about £11/US$17) a month from parents. The school will soon also receive government education funding.

Grade 9 students are sitting Cambridge IGCSE IsiZulu this year. From next year, the first cohort will study, in the English-medium curriculum, Cambridge IGCSEs in science, maths and English before moving on to Cambridge International A Levels.

Mark Barber, Cambridge’s Senior Schools Development Manager for Sub-Saharan Africa, says: “ASE is representative of a growing number of schools across the region that are committed to our own goal of extending access to quality education for all. As standards in education are ever more closely scrutinised, schools like ASE are offering learners the opportunity to study a world-class international curriculum and compete on a global stage, learners for whom previously this was unattainable.”

But individual attainment is only part of the picture, says Nonhlanhla. “In Tsakane right now, unemployment is sitting at around 70 per cent, but very few people have the skills to improve the situation. We want to empower our scholars to come back and transform Tsakane from grassroots up when they graduate.”

We want to empower our scholars to come back and transform Tsakane”
– Nonhlanhla Masina, ASE co-founder

Andisiwe Nxiba, 12
“I feel very good about my school. The environment I’m in teaches us about mutual respect. I hope to be admitted into a leading university and become a doctor.”

Bongiwe Gama, 13
“I feel great about this school because I learn a lot here and the school values that I follow are really amazing. I’ve learnt how to strive for excellence by always working hard. I want to be a teacher when I’m older.”

Lebohang Jwambi, 14
“Before I joined ASE I couldn’t read. Now I hope to go to university and study to be a doctor. I feel very proud to be a member of ASE because my community thinks very highly of my school!”
Marking the anniversary of Hodder Education and Cambridge International Examinations

For 25 years Hodder Education has been trusted by Cambridge schools around the world to provide quality support for teaching and learning. Today we continue to offer a full service of print and digital material, plus teacher training in almost every subject at every level.

For this reason we have been selected by Cambridge International Examinations as an official publisher of endorsed material for their syllabuses.

Find out more about us and Cambridge at www.hoddereducation.com/cambridge
Engaging parents

A good relationship with parents creates a happy school environment for everyone. Here, principals and teachers share good practice in keeping parents informed and involved.

**TIP**
**Appoint parent relationship executives among your school staff**
This gives parents a clear point of contact.

**TIP**
**Engage parents in learning and not just in the school environment**
Invite them into lessons so they can see exactly what and how their children are learning.

**TIP**
**Create a space for parents**
This could be as small as a notice board or as big as a café. It will make them feel welcome.

**TIP**
**Hold workshops and sharing sessions for parents**
These can cover subjects such as smoking and substance-abuse prevention, the best ways to approach teenagers and cyber bullying. You might find some parents have areas of expertise that you can learn from.

**TIP**
**Encourage ambition!**
Parent–school associations don’t have to focus only on the school – use their combined expertise in charity work and community projects.

**TIP**
**Get parents involved in planning lessons**
Actively invite their input, especially if they expect a high level of involvement in their child’s education – they will be more receptive to your ideas if you do.

Talking to parents about Cambridge programmes?
Find factsheets and presentations at www.cie.org.uk/marketingresources

We recently decided to make the transition from a mixed curriculum to offering only Cambridge programmes in all our schools. We initially experienced resistance from parents, who were understandably concerned about change and that there may be different expectations put upon their children. However, we knew this was the right thing to do: the options Cambridge offers for further studies have immense value. Parents choose us for our student-centred approach, and Cambridge fits in perfectly with this. So through orientation sessions, good use of online resources, and teacher training, we managed a smooth and successful transition.”

– Iranthi Gunawardena, Coordinating Principal, Royal Institute (Havelock Town/Maya Avenue branches), Sri Lanka

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PHOTO: ALAMY

**WWW.CIE.ORG.UK**
**SUPPORT FOR SCHOOLS**

The latest tools and developments to help you and your learners get the most out of Cambridge

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**COLLINS CAMBRIDGE IGCSE MATHS**

**SUBJECT:** Maths  
**RESOURCE:** Student Book (print), Teacher’s Pack (print and CD-ROM), Digital Student Book and chapter tests on Collins Connect (online)  
**PUBLISHED BY:** Collins

This second edition provides in-depth coverage of the latest Cambridge IGCSE Mathematics 0580 syllabus for examination from 2017–18. The resources cover the core and extended curriculum together in one volume providing extensive practice and unparalleled teacher support. Collins is working with Cambridge towards endorsement of the Student Book.  
Visit [www.collins.co.uk/cambridgeIGCSEmaths](http://www.collins.co.uk/cambridgeIGCSEmaths)  
Email: international.schools@harpercollins.co.uk

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**CAMBRIDGE IGCSE AND INTERNATIONAL A LEVEL COMPUTER SCIENCE**

**SUBJECT:** Computer Science  
**PUBLISHED BY:** Cambridge University Press

With the supporting suite of resources available for both Cambridge qualifications, these revised and updated resources offer support on theoretical and practical aspects of the updated syllabuses. Bringing the subject to life, Cambridge resources equip students and teachers with the knowledge and confidence they need to help prepare them for success.  
Visit [education.cambridge.org/computing](http://education.cambridge.org/computing)  
Email: educationmarketing@cambridge.org

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**Next-generation introductory courses now online**

We’ve launched 18 new online training courses for teachers who are new to teaching Cambridge syllabuses. The syllabus-specific courses replace our existing introductory-level online courses.  
Highly visual and interactive, and supported by audio recordings of teachers, these courses will take teachers through the following key areas:

- introduction to your Cambridge syllabus, including how it is organised, what each part is like and a syllabus content overview  
- understanding the assessment and mark schemes  
- planning your course  
- support from Cambridge.

The online courses cover the following subjects: Cambridge IGCSE First Language English, English Literature, Maths, English as a Second Language, Biology, Physics, Chemistry, History, Geography, Economics and Business Studies;

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**New posters for schools**

Planning a school open day? Go to our website for free materials to support your event, including a new range of posters, factsheets and presentations for parents.  
Visit [www.cie.org.uk/marketingresources](http://www.cie.org.uk/marketingresources)
RESOURCES ROUND-UP

Language Rich
Insights from Multilingual Schools

The Cambridge Teacher series
Stuart Shaw, Helen Imam and Sarah Hughes

WORKING WITH PHOTOS: THINKSTOCK

Plan ahead with endorsed textbooks

We are working with publishers to help you get ahead with your syllabus planning, ensuring that we have endorsed textbooks ready to support our key new and revised 2018 syllabuses.

When these new syllabuses are posted on our website in September 2015, a year before first teaching, we will also provide information about the textbooks that will support them. This will include contents and sample pages.

This is the first year that we have done this. Our new way of endorsing textbooks makes sure they are available to support our revised syllabuses in good time for first teaching. We have just started the process again for the 2019 review of syllabuses.

Cambridge International Examinations

Endorsed for full syllabus coverage

Read up on bilingualism

Bilingual and multilingual education is the central principle of many Cambridge schools. To share some of the excellent practice we encounter around the world and the expertise of our staff, we have worked with Cambridge University Press to publish two books: Building Bilingual Education Systems and Language Rich: Insights from Multilingual Schools.

Visit www.cambridge.org/education to purchase them.

Cambridge skills guides: could you help us create them?

Cambridge is undertaking research with teachers worldwide to find out what they need to support the development of their learners’ skills. We are also creating a series of skills guides to help schools and their learners.

We are keen to hear from teachers about the skills that need to be supported and how we might support the development of these skills.

If you want to be involved in this research and think that you have valuable insight into the range and nature of skills support we could develop, email proposals.p@cie.org.uk with ‘skills guides’ in the subject line.
PROFESSIONAL DEVELOPMENT

Training and events
Helping you deliver your Cambridge programmes with world-class efficiency

Zimbabwe Teachers Conference
More than 230 delegates attended the Zimbabwe Teachers Conference in April.

The event, hosted by Arundel School in Harare, featured 16 training workshops in a variety of subjects, from Cambridge Primary through to Cambridge International AS & A Level. Representatives from Cambridge International Examinations and Cambridge University Press also attended.

Face-to-face events, especially conferences, are a valuable and rewarding experience for Cambridge teachers. As well as providing guidance on teaching Cambridge syllabuses and individual development, training events such as this one in Harare allow networking and idea sharing among teachers.

This summer Arundel School will be celebrating its 60th anniversary. The conference organisers look forward to hosting again next year.

Find a course
To find out more about the types of training available, visit the Professional Development pages of our website at www.cie.org.uk/professionaldevelopment.

You can search for and book any of our courses through the Cambridge events and training calendar at www.cie.org.uk/events.

Any questions?
Visit our help portal at ask.cie.org.uk or email info@cie.org.uk.

Could you become one of our teacher trainers?
In response to the growing demand for Cambridge training we have been running a series of recruitment events for UK-based trainers to deliver face-to-face and online training around the world. We are currently looking for individuals who are experienced in our programmes and qualifications to become teacher trainers for Cambridge International Examinations.

We offer
• training on how to teach adults
• support for your own continuing professional development
• help towards becoming an accredited Cambridge Trainer
• opportunities to travel internationally
• an attractive fee for each workshop that you run.

What it’s like being a trainer: Helen Ash
“Training, for me, is all about the people you meet – people with different perspectives, views and talents, people you might otherwise never have met. It’s not all about jetting off to amazing destinations. Your colleagues – other trainers – are inspirational in their enthusiasm for their subject and invariably good company.”

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...on results day

The day exam results come out is an emotional and busy time for everyone – including the customer support team in Cambridge fielding queries from across the world. Head of Customer Support Marion Tucker tells us about it.

Results day for us starts at 5am, with our customer services team primed and ready to answer the phones and emails. Although the results aren’t released on our website, CIE Direct, until 6am, we can see the traffic to it start to rise from 5am with people clicking and refreshing.

“At 6am the results are out, and the phones start to ring immediately. “We make sure all our staff are equipped to answer queries about marking, grading and individual subjects. Often we find that schools are seeking reassurance that the grades have been subject to rigorous marking and grading standards, which we are able to show is the case. And if we encounter a problem or discrepancy, we’re able to resolve it straight away (in about three quarters of cases), or find an answer for the customer and reply to them within a few hours or days.

“Training wasn’t something I set out to do. Looking back over the years now I realise just how far I have travelled, in my career and around the world.”

The delegates are dedicated professionals, eager to question and reflect on details of what they do in the classroom and why.

“Mine is a privileged position. You’re exposed to approaches and experience outside of your own, occasionally challenging what you thought you knew, always adding to your own repertoire as well as theirs as you work with delegates during your time together. “Training wasn’t something I set out to do. Looking back over the years now I realise just how far I have travelled, in my career and around the world.”

The next round of applications will open in October 2015. Visit www.cie.org.uk/trainerrecruitment to find out more and to apply.

I am very happy. The sessions were fruitful” — delegate at Zimbabwe Teachers Conference, Harare

They’re a highly skilled team. But they can’t work without food!”

“The phone lines close at 7.15pm. The early shift will already have gone, and the rest of us are preparing to leave the office. I head straight home, have a bath and try to wind down from the day... ready to do it all again the next. Results day is the busiest, but the days and weeks afterwards are also quite busy. That’s the nature of the job.

“And I couldn’t think of a more skilled and professional team to share the load.”

In numbers

1,229 The highest volume of phone calls recorded by the customer services team in one day

117,530 emails and 59,017 phone calls were handled by the team in 2014

Active Learning Day in Dubai

In response to huge demand, we are excited to be running a series of workshops focusing on active learning. The workshops will help teachers develop their understanding of active learning and how to apply it in the classroom.

To sign up for the Active Learning Day in Dubai, UAE on Thursday 10 December 2015, go to www.cie.org.uk/cse-2015

This training precedes the Cambridge Schools Conference in Dubai – however, you can book a place even if you are not attending the conference.
What Cambridge programmes do you offer?
We offer Cambridge IGCSEs in English – Second Language, Maths, Physics, Biology, Geography and Latin. Soon we will also teach Cambridge International A Levels in Maths and English Language to ensure that our students acquire a strong competence in these subjects and to improve their chances of getting into the best international universities.

Why did you become a Cambridge school two years ago?
We wanted to develop bilingualism, which has great benefits in terms of international relations and language awareness. We believe that a bilingual programme is an engine for reform and a challenge to revisit pedagogical methodology, practices and strategic plans. We were the first state school in Rome to offer programmes that develop subject knowledge and new language skills at the same time.

How did you implement Cambridge IGCSE alongside the Italian curriculum?
We devised a ‘blended curriculum’. First we compared the national and international curricula to identify essential topics and to plan the order of delivering concepts. Then we developed a long-term plan for the next two to four years.

In the classroom we are supported by native English speakers who are also subject experts. They are given guidance by Italian teachers, qualified in the subject, on how to explain key concepts in the second language.

The process has been long and complex, but our success was due to involving the whole school, from subject teachers to administrators. Plus, Cambridge has played a fundamental role by answering all our queries.

How has your Cambridge regional team supported you?
Your expertise positively influenced our professional learning and helped in the implementation of our bilingual programme.

Were parents supportive of the introduction of Cambridge IGCSE?
Parents had been asking for bilingual education in state schools for a long time, and our project of blending Cambridge programmes with national requirements was immediately popular. It was the long-awaited answer to their demands and a way of enabling their children to develop as global citizens.

What makes you proud about your school?
We are proud of the constant cooperation between teachers, parents and students, which has allowed us to teach bilingually. The growing number of students asking for enrolment is the best reward for the hard work of the teachers.
Cambridge Computing resources for Cambridge Computing qualifications

Cambridge University Press works closely with Cambridge International Examinations as part of the University of Cambridge, and we publish over 100 fully endorsed titles across a broad spectrum of subjects.

Our Cambridge Computer Science and ICT suite, covering Cambridge IGCSE® and Cambridge International AS and A Level qualifications, has been reviewed and updated to include recent developments in this fast moving field.

Written by experienced examiners and trainers, each title offers support on both the theoretical and practical aspects of the updated syllabuses to provide current and in-depth resources.

*We are working with Cambridge International Examinations towards endorsement of titles within the full Computing Suite.

Cambridge IGCSE® Computer Science Coursebook
Sarah Lawrey and Donald Scott

Cambridge IGCSE® Computer Science Programming Book for Microsoft® Visual Basic
Richard Morgan

Cambridge International AS and A Level Computer Science
Sylvia Langfield and Dave Duddell

Cambridge IGCSE® ICT Coursebook*
Victoria Wright and Denise Taylor

Cambridge International AS and A Level IT*
Sarah Lawrey and Paul Long

To discover more about our full range of Computing resources visit: education.cambridge.org/computing
Cambridge Schools Conference 2015

Education fit for the future: planning for a changing world.

Thursday 10 December to Saturday 12 December
Raffles International School, Dubai, United Arab Emirates

This conference will focus on how teaching, assessment, learning spaces (real and virtual) and leadership will need to evolve in order to enhance student learning in the future. Our programme is designed to support professional learning by offering a range of perspectives on the conference theme, discuss and debate these in our panel sessions and explore their implications in group discussions and workshops.

The cost for attending this conference is £395. This price includes the two-day conference and evening social event on Friday 11 December. Accommodation and Active Learning workshops are not included.

For more details, including how to book your place, go to www.cie.org.uk/csc-2015

Follow @CIE_Education for all the news, information and live updates from the conference. Use the hashtag #csconf15 to join the conversation.