HIGHER EDUCATION

bulletin

SPRING 2013

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Welcome to the Spring 2013 issue of OCR's Higher Education Bulletin.

The capacity to adapt to change is essential in education and it looks like this will certainly be true for 2013. In January, Michael Gove set out his proposals for A Level reform. While we wait to hear Ofqual, the exams regulator's response, a number of universities and commentators have expressed views especially around the place of the AS qualification. Two weeks later Michael Gove announced a 'U' turn on The English Baccalaureate (EBC) proposals for changes to GCSE. We bring you up to date with what this means in practice and share some thoughts from those at the front line on pages four and five.

A voice not heard very much in this debate is that of the student and, on pages seven and eight, we share a conversation with Gemma Painter from the NUS.

Seeking views and working collaboratively with higher education continues to be a key priority for OCR. Joint research and workshops present real opportunities for both, and we showcase some of our recent joint initiatives in this issue.

The need for more maths in subjects that use maths has been a recurring theme in our subject consultative forums. We share our thinking and plans in respond to concerns by bringing together mathematicians and users of maths in a special maths consultative forum.

If you would like to get in touch we always welcome your feedback and also any items or discussion points you might like to include or share in the bulletin.

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Sally Brown
Email: Sally.Brown@ocr.org.uk
Telephone: 01223 558 329

Vocational qualifications
Telephone 024 76 851509
Facsimile 024 76 851633
Email vocational.qualifications@ocr.org.uk

General qualifications
Telephone 01223 553998
Facsimile 01223 552627
Email general.qualifications@ocr.org.uk

A DIVISION OF CAMBRIDGE ASSESSMENT

HE research at Cambridge Assessment – an update of recent research findings

Dr Simon Child, Research Officer

In the Summer 2012 edition of *HE Bulletin*, Dr Irenka Suto explained how researchers at OCR's parent organisation, Cambridge Assessment, have run a series of linked research studies related to Higher Education. This research was conducted with the aims of creating an evidence base to inform the redevelopment of A Levels, and strengthening the links between qualification developers and the higher education community. This article outlines two recent research studies that aim to investigate students' transition between further education and university study.

An exploration of additional support classes at university

In our previous focus group study, lecturers stated that students arrived at university underprepared in certain skill areas including critical/higher order thinking, academic writing, and independent research skills. Further to this, 60% of the lecturers in our questionnaire study reported that their institutions offered additional support to their students which focused on their general skills, subject-specific content or both. Following on from these studies, Dr Sanjana Mehta from Cambridge Assessment's research division, Sally Brown from OCR and I conducted a study with three main aims:

(i) To collect more in-depth information on the content and structure of additional support classes in biology, English and mathematics

(ii) To gather the views of students, lecturers and A Level teachers on the effectiveness of these classes

(iii) To determine the potential for the content and skills covered in these classes to be included at A Level.

For each target subject, case studies were conducted at three contrasting universities that ran additional support classes. Each case comprised lecturer and student interviews, lesson observations by researchers and an A Level teacher, and a facilitated discussion between the A Level teacher and university lecturer.

We found that classes focused on a number of subject-specific and general skills. For example in biology, classes typically centred around the appropriate writing and formatting of scientific reports, while in English, classes focused on developing students' awareness of critical approaches and independent reading. For mathematics, a variety of specific content areas were covered, to fill in perceived gaps in knowledge for students coming from A Level. The A Level teachers thought that many of the areas covered in the additional support classes had been addressed at A Level, but in less detail. In biology, recommended changes to the A Level included earlier development of project skills and numeric calculations. For English, participants advocated that the A Level could include a greater focus on independent criticism and historical background of texts. Finally, for mathematics, participants suggested that making closer links between different content areas would be beneficial. More in-depth analysis of the data collected is currently underway.

Comparing the assessment types students encounter at A Level and university

In our previous focus group study, one of the reasons lecturers perceived students to be underprepared for university study was that they were ill-equipped for the differences in assessment practice between A Level and degree. This view was based on the perceptions that A level assessment encourages 'teaching to the test' and that students have difficulty adjusting to limited resit opportunities. Dr Frances Wilson, Dr Irenka Suto and I explored this further, by systematically comparing the assessments students encounter at A Level and in their first year at university. As with the other studies, this was done for biology, English and mathematics. Assessment materials from 16 universities were collated, and compared to assessments in the equivalent A Levels.

We were interested in four aspects of assessment at A level and university:

(i) The assessment types students were exposed to (extended writing, multiple choice etc.)

(ii) The written guidance and scaffolding students were given during the assessments

(iii) The opportunity for resits

(iv) The timings of the assessments throughout the academic year.

We found a greater variety of assessment types at university compared to at A Level. Biology students had the most varied assessment at university, followed by English and mathematics. Interestingly, the written guidance provided to students was greater and more detailed at university. It is possible that this guidance is in place due to the emphasis at university on working independently, and to help students negotiate new forms of assessment. Unlike at A Level, students were given only one resit opportunity in the majority of cases, with a cap on the potential mark that could be achieved. Finally, students also had to cope with earlier summative assessment compared to at A Level.

The HE research programme aims to continue over the following years, investigating new issues and questions as they become apparent. We hope that the use of systematic and methodologically sound approaches to research will strengthen the development of future qualifications.

Policy Update

Changes to A Levels announced

On 23 January 2013, Mr Gove set out his proposed changes to A Levels in a letter to Ofqual. In it he sets out the following proposals:

- **AS to be a standalone qualification**

The new AS qualification will cover half the content of an A Level.

- **A fully linear A Level**

Assessment of students' knowledge and understanding "across the whole course" takes place at the end of two years.

- **First teaching in September 2015**

The date for first teaching is put back by a year (from September 2014).

- **Subjects**

The letter states that "the first new A Levels in facilitating subjects" will be developed in time for first teaching in September 2015. These being: English literature; maths; biology; physics; chemistry; history; geography; modern and classical languages. These correlate to those subjects identified in the *Informed Choices* booklet from the Russell Group

- **University involvement**

The Russell Group of universities will create an organisation to advise Ofqual on the content of A Levels focusing on subjects most commonly required for university entry, as well as taking part in an annual post-examination review to consider standards.

Dr Wendy Piatt, Director General of the Russell Group, said: "We have been considering a range of options to contribute to the future development of A Levels and have asked Prof Nigel Thrift, Vice-Chancellor of the University of Warwick, to chair a working party to take forward the idea of the creation of an organisation to provide advice to Ofqual on a number of A-level subjects."

Professor Nigel Thrift said: "That advisory body will focus on those A Levels most commonly required for entry to our leading universities to ensure that prospective students have the ability to study the subject at advanced level in order to be able to access the content of the degree course they later choose to study at university."

These changes come into being from 2015, and follow an earlier announcement in November about changes to GCE which set out, with immediate effect, the removal of the January series of exams.

The proposals mark a significant change from where we are now and in our conversations with higher education and schools, they have been met with a somewhat mixed response, some concern and some common ground.

- **AS as a standalone qualification**

Following the statement from the Department of Education (DfE) that said 'most Universities don't use AS', we conducted a quick, straw poll of our HE contacts which seems to suggest something different:

"We do use AS for the most selective courses. AS is also a very useful guide to how a student is doing; particularly in the case of a student who is predicted A/B grades at A Level but who achieved mediocre GCSE results."

"DfE is strictly correct in that we don't formally use AS grades - this is to do with equity as not all AS grades are routinely cashed in and certificated whereas all (UK) students have GCSE results. However, and in relation to highly selective courses, AS grades are extremely helpful; where there are more applicants than places and where GCSE grades are poor and A2 prediction is high."

"In relation to our (highly selective) maths degrees, we requires students to send UMS scores. If they don't, then they won't be considered for an offer. Other departments use the AS results as a very useful and very recent indicator of performance. It aids understanding of where the student is right now, aids understanding of the A2 prediction and provides context of where the student is in their journey towards the final A2 result. De coupling of AS/A2 would result in patchy AS results for a few students which would cause considerable problems for us. Performance between GCSE and A2 can change so much."

These quotes seem to resonate with the Russell Group who also offer additional reasons for maintaining the AS:

"AS Level results after one year of study can also be effective in giving talented students from poorer backgrounds the confidence to apply to a highly selective university, thus helping to widen participation."

"Whilst we have welcomed the Government's review of the modular structure of the A Level, we do not believe this needs be extended to the complete removal of the AS examination from the A Level."

There is a concern from schools that:

"It will be difficult to understand the motivation for students to take a

Policy Update

standalone qualification unless it is an entry requirement for higher education and this could mean that by default it is only taken by the more able students."

"Funding arrangements do not support this standalone qualification and it will be very difficult for us to offer to small numbers of students"

"Predicting grades for entry to HE will be a real problem. Current levels of prediction are difficult and with no external assessment to help with this, it is difficult to see how accurately grades could be predicted for HE admission staff."

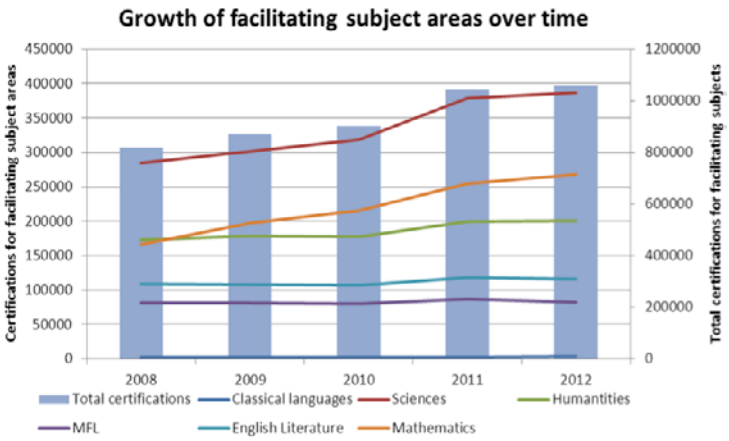
- **The focus on 'facilitating' subjects**

From schools, there is a concern that the *Informed Choices* booklet is being misinterpreted and clarity from HE about the importance of 'facilitating' subjects is essential to avoid a potential narrowing of the curriculum.

The graphs illustrate the current take up of some of the trends and shifts in take up of subjects at A Level.

Ofqual response to Michael Gove

Ofqual's response to Michael Gove has now been published. Highlighting both the demanding timetable and the need to ensure A level and AS qualifications are 'coherently designed and assessed', Ofqual's letter lists the six further subjects which will be added for first teaching from September 2015 – psychology, art and design, sociology , business studies, economics and computing.



Source: Joint Council for Qualifications

Changes to the curriculum offer?

Uptake of individual subjects by school type (% of A level students)

Subject	Academy	FE	Grammar	Independent	6th Form College
Mathematics	27.9	17.5	39.3	38.6	22.9
Biology	21.9	14.0	32.6	24.2	17.2
Psychology	19.4	24.7	18.5	9.4	21.9
History	18.1	12.2	21.6	20.3	13.5
English literature	19.1	11.2	21.2	19.2	11.8
General Studies	20.7	2.9	38.9	6.0	24.2
Chemistry	16.8	9.2	28.6	22.6	13.6
Physics	11.9	5.8	18.0	16.1	8.0
Geography	11.8	6.1	13.5	15.4	6.8
Sociology	9.6	16.0	6.0	0.9	12.4
Business Studies	8.6	13.7	7.8	10.0	11.0
Media studies	8.6	12.3	4.5	1.8	10.9
English Language	7.1	11.5	5.3	2.7	11.9

Source: Uptake of GCE A level subjects Statistics Reports Series No 42 Tim Gill Sept 2012 Cambridge Assessment

Ten most common subject combinations

Males	Females
Biology -Chemistry- Mathematics	Biology – Chemistry - Maths
Chemistry – Maths- Physics	Biology – Chemistry - Psychology
Chemistry – Further maths – Maths-Physics	English literature – History - Psychology
Maths – Further maths - Physics	Biology – Chemistry - Geography
Biology – Chemistry - Physics	English literature – History – Religious studies
Biology – Chemistry -Maths - Physics	Biology – Maths - Psychology
Biology- Maths - physics	Chemistry – Maths - Physics
Maths – Physics – Design & technology	English literature – Psychology -Sociology
Economics -Maths - Physics	English language –Psychology- Sociology
Biology – Chemistry- Psychology	English Literature- Govt & politics - History

Source: Uptake of GCE A level subjects Statistics Reports Series No 42 Tim Gill Sept 2012 Cambridge Assessment

Policy Update

Key Stage 4 reform

On 7 February, the education Secretary Michael Gove announced that his proposals to replace GCSEs with EBCs, based on one exam in each core subject, "was one reform too many". Instead he outlined reforms to existing GCSEs:

- New GCSEs for first teaching in 2015 will be in English, maths and sciences with the addition of history and geography.
- The exams will be linear, testing extended writing in subjects such as English and history, have fewer bite-sized and overly structured questions, and have a greater emphasis on quantitative problem-solving in maths and sciences.
- Internal assessment and the use of exam aids will be kept to a minimum and used only where there is a compelling case to do so.
- New GCSEs will be universal qualifications.
- Reformed GCSEs will no longer set an artificial cap on how much pupils can achieve. Pupils will no longer sit higher or foundation tiers.
- The approach to assessment will vary between subjects and a range of solutions may come forward.

Policy update on exam reform in Wales and Northern Ireland

While the exam reform programme in England has generated much debate, these are interesting times too in Wales and Northern Ireland. The dynamics and timetable of exam reform are unique in each administration. The Welsh government, whose action on exam reform is six months ahead of Northern Ireland's, confirmed in January 2013 that it would retain GCSEs and A Levels, alongside a 'revised, more rigorous' Welsh Baccalaureate. It backed the findings of a 2012 Qualifications Review which also recommended:

- the establishment of Qualifications Wales as an independent regulator which could, in time, award qualifications
- 14 - 16 vocational qualifications to have a maximum equivalence of two GCSEs
- programme-led funding to be introduced post 16
- creating new GCSEs in English Language and Welsh First Language
- introducing two new maths GCSEs to separately cover numeracy and mathematical techniques.

In Northern Ireland, consultation started in November 2012 and the review is due to report to the Minister of Education in June 2013. The Minister is clear that he wants a suite of qualifications that are robust, fair and portable. They must be credible in the eyes of employers and other education providers, including universities.

It is therefore possible that the three countries will have parallel school qualifications, rather than the largely overlapping ones they do now.

OCR believes in the importance of maintaining a single model of A Level across England, Wales and Northern Ireland. It is clearly important for young people in the UK and Higher Education institutions (home and abroad) that there is understood to be an A Level in the UK that is the same, whichever administration is responsible for policy and regulation. This applies as much to any proposed interim changes to the existing A Levels as to any new, reformed A Levels.

Increasing the level of involvement of HE in the review of qualification performance is important. We believe that awarding organisations must be given this responsibility in addition to any programme managed by Ofqual.

In conversation
Gemma Painter from the NUS

The National Union of Students (NUS) is a voluntary membership organisation which makes a real difference to the lives of students and its member students' unions. Representing the interests of more than seven million students, its mission is to promote, defend and extend the rights of students and develop and champion strong students' unions.

The NUS is 90 years old and to celebrate this we invite Gemma Painter, who is a member of OCR's Qualifications Committee, to share a conversation with us about education reform. Gemma is the NUS's Vice President (Further Education).

Can you give us a bit of background to the NUS and an idea of number of members and the sort of areas you cover?

The National Union of Students is a confederation of 600 students' unions, amounting to more than 95 per cent of all higher and further education unions in the UK. Through strong and active students' unions, we are able to make a real difference, winning on a campaign to protect Care to Learn funding, for example, or huge concessions on plans for the 24+ Advanced Learner Loans.

Our vision is of NUS as a pioneering, innovative and powerful campaigning organisation; the national voice of students. We fight barriers to education, empower students to shape both a quality learning experience and the world around them, supporting influential, democratic and well-resourced students' unions.

What is your background and how long have you been in this role?

I have been NUS Vice President (Further Education) for 18 months, and Deputy President of NUS for the same period of time. Before that, I was president of the students' union at Cornwall College having been elected immediately after studying A Levels in English literature and language, maths, chemistry, philosophy and history. Whilst at Cornwall, I was also on the NUS National Executive Council in a voluntary capacity as a further education representative.

There is a great deal of change in both the school and higher education landscapes. How do the NUS articulate their voice?

It's important to remember that over two-thirds of the membership of NUS is in further education. Unfortunately, our work in higher education often receives more media coverage but there is plenty of work going on with our further education members, particularly for those who wouldn't see themselves as 'traditional' students. Our campaigns reflect that, and one of the main areas of our work at the moment is to ensure that more students are able to study without having to worry about paying the bills while they do so.

It is important students' interests are taken on board at a national level – often through government lobbying or direct action, but it is hugely important that students are fully involved in decision making at all levels, from the classroom to the workplace and boardroom.

Through our Student Governor Support Programme, we help both students and governing bodies to ensure that learners are consulted on issues that affect them, and that they have a stake in the future strategic direction of colleges as organisations.

On 21 November I marched on the streets of London alongside the students I represent. Our slogan that day was 'Educate, Employ, Empower' representing the breadth of the challenges that face students currently and what is at stake for them if they can't get access to learning and training.

You will be aware that we are in the midst of A Level reform. How did you respond to the consultation? What were the key points you raised in your response to the key points?

When the consultation into A Levels was launched we were really struck by two things. Firstly, the public narrative on 16–18 qualifications is almost exclusively concentrated on A Levels and as much as we value A Levels, we seek to change that. We desperately need a society that values vocational qualifications; that challenge is made even harder because it's almost impossible to convince the traditional press to report on them!

Secondly, lots of politicians that berate assessment re-sit opportunities are the same politicians who talk about the need to reinvigorate a spirit of aspiration in my generation. A Levels should be world class, they should be a high standard, but they should not be a classification.

Michael Gove has recently announced changes to the curriculum for 14–16 years olds. What is the NUS view?

The narrative created by Michael Gove and his supporters is that the measure of performance should be an ability to retain a large amount of information for a long time and repeat it under very specific conditions. That doesn't

represent a good test to me, I can't think of any real world situation where that might be useful.

It isn't 'dumbing down' to advocate for a system in which all students can demonstrate what they can do. What we absolutely do not need is a compulsory examination system primarily designed to show students how they can fail.

We are hearing that there is a drop in admissions to universities this year, how has the NUS responded to this and do you have a sense as why this has happened?

Early signs are that the drop in applications last year will be repeated again this year. This is really worrying, even after the introduction of top-up fees applications bounced back after a one year drop. It looks like that might not happen this time and the Government can't ignore that very real possibility.

There could be a range of factors involved, obviously the rise in fees will have played a part, but until we know more specifically which groups have been affected we shouldn't speculate. One group that was strongly affected in the 2012 intake was mature students and it makes sense that they'd be put off by the prospect of higher debts. It's clear that a disagreement between Gove, who wanted to force grades down, and BIS, who pushed universities to chase students with high A Level passes, has had an impact on the ability of universities to recruit.

The NUS is 90 years old this year. What is the vision for the next decade?

In the next decade, I would like to see NUS advocate a fairly funded, flexible and accessible tertiary education system without the barriers created by our current system – barriers caused by funding and student finance, but also by elitist systems that value higher education over further education and academic over vocational. To do this, we need to be a stronger movement than ever. We will be working constantly to improve the representation of further education, vocational, work-place and all other non-traditional learning within students' unions and NUS.

If you were stuck in a lift with a government minister, what three things would you ask for on behalf of your members?

I would demand a fair and equitable system of financial support for further education students.

I would also ask for a living wage for all, with no age differentials, and specifically no lower rate for apprentices.

I would also demand a fairly funded and flexible tertiary education system that allows people to transcend the boundaries between vocational and academic, and further and higher education, without the limitations of funding and entitlements we see in our current system.

Working together

Knowledge retention between pre-university course and undergraduate study

OCR has supported a research pilot study in five biological sciences departments – Universities of East Anglia, Leicester, Cardiff, Birmingham and Bristol. Working with representatives from each of the universities, OCR collated a test for new undergraduates. The test was designed to look at how much students retained knowledge learnt through either A Levels, pre-U or access courses when they arrive at University. The test looked at knowledge retention in four areas: cells; biochemistry; physiology and; genetics.

Harriet Jones from the University of East Anglia sets out the rationale for the research.

Students are offered places on university courses based on the grades they achieve for their A Levels. Degree level programmes are designed with an expectation of knowledge partly based on those grades but mostly on the preconceptions on the part of university lecturers about the conceptual understanding incoming students will have. However, there are no studies which tell us how much core material is remembered by students and how this relates to their grades. Such information is crucial if A Levels are being reformed in terms of their usefulness for entry to Higher Education. Decisions are being made about content without information about how much of this content is retained by students once they enter higher education. Decisions about how A Levels are performing in this respect should be informed by research.

The results will provide information on:-

1. Whether or not there is a problem with retention of key information and core concepts.
2. Whether there are any differences between exam boards.
3. Whether grades achieved at A Level correlate with knowledge retained.

If there is no problem, results need to be fed to universities and other bodies to inform their first year teaching and more information regarding core criteria could be used to avoid unnecessary repetition. If there is a problem, this needs to be fed into the thinking about A Level teaching and assessment and the information can be used by University lecturers to adjust the content of the first year teaching, and support offered prior to the beginning of the degree programme, as necessary.

The methodology used was a 50 minute multiple choice questionnaire based on topics all covered within the subject criteria for GCE A Level biology. Questions tested terminology, vocabulary, and key concepts. Students were assured that the test was anonymous, they had the right not to do it and that results would not have any impact on the individual.

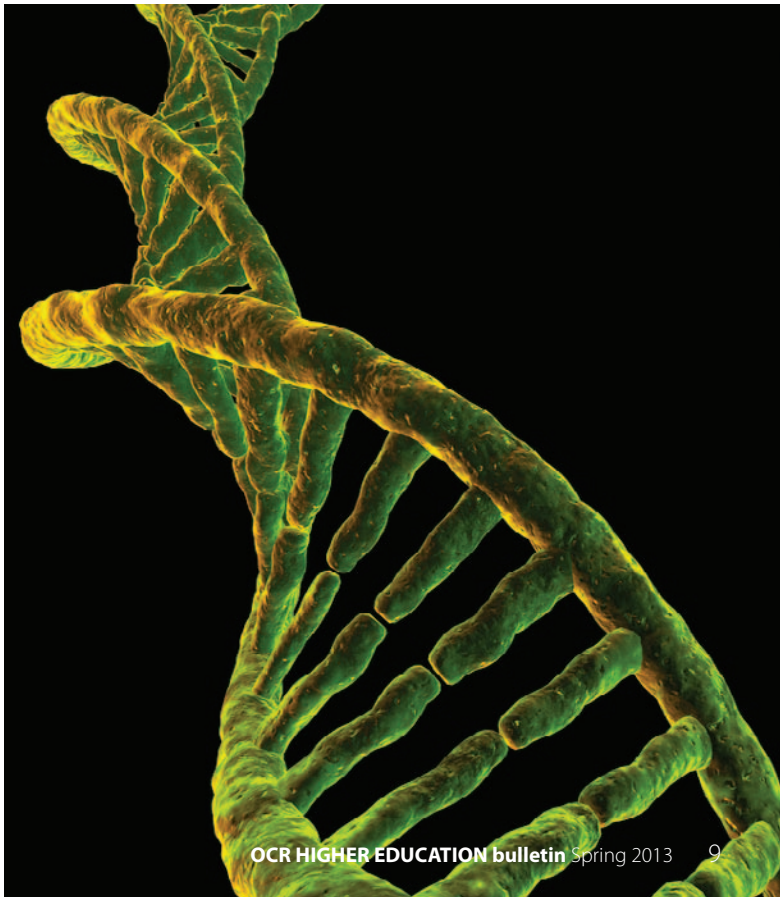
Paper copies were distributed to first year students, on any biological science degree programme, during induction week or week 1 before any biology teaching.

Full analysis is still being conducted but early findings suggest:

- Respondents' test performance was below expectations.
- There appears to be a relationship between AS/A Level grade, year of AS/A Level and test performance.
- There was a difference in performance between subject areas.
- There appears little relationship between extracurricular biology related activities and test performance.

There is clearly something worth investigating here and the team are taking this forward.

For more information please contact Harriet Jones, University of East Anglia, Harriet.Jones@uea.ac.uk.



Working together

OCR leads a workshop on The Extended Project and its merit for progression to HE at the UCAS Annual Conference for Teachers and Advisers

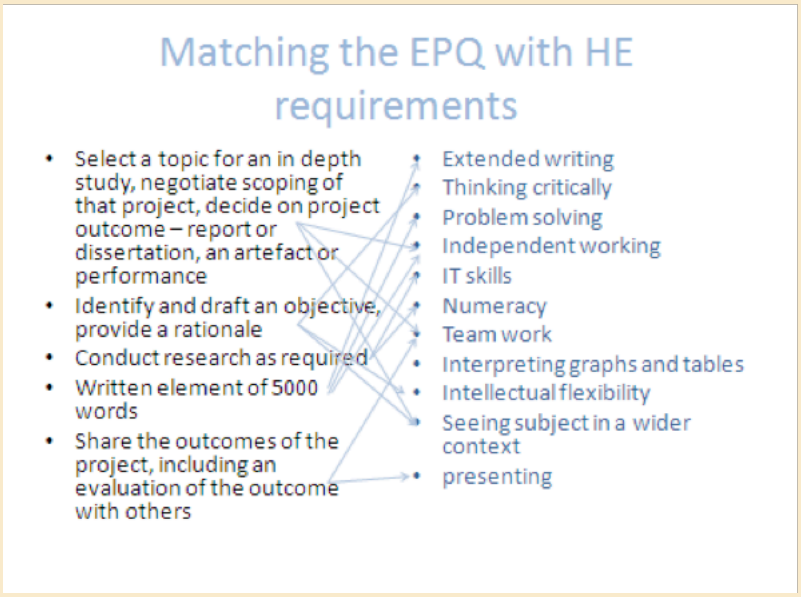
The 2 day UCAS Annual conference for Teachers and Advisers took place in Nottingham in February 2013 and attracted well over 200 delegates interested in hearing from HE admissions staff and sector leaders about HE admissions and key developments affecting progression to HE.

Dominique Slade from Qualifications Development at OCR worked closely with Chris Fuller, University of Southampton, to produce a combined presentation about the merit of the Extended Project Qualification (EPQ) for progression to Higher Education. The workshop was popular, indicating a growing interest in a qualification that universities are gradually starting to recognise, with the University of Southampton at the forefront by offering an alternative offer for students applying to a humanities or social science degree and having gained a grade A for their Extended Project.

The workshop presentation started with a brief summary of the outcomes of the extensive research carried out by Cambridge Assessment's Research Division. The outcomes of the research showed that more than half of the university lecturers involved in the research thought that students were underprepared when they started a degree course. Research showed that, although students have strong IT skills, are good and confident when presenting and are, overall, well motivated, they often struggle with the demands of academic writing, independent research, the ability to read and think critically and produce personal arguments.

For Chris Fuller and the University of Southampton, this problem is not so much a 'skills gap' more a 'skills disconnect' between what students embarking on a course and lecturers in universities expect from each other. The notion of a 'skills gap' creates the impression that A Levels somehow do not do enough to prepare students for Higher Education and that degrees are just harder versions of A Levels. Degrees require different skills and are assessed in different ways, and this change requires adjustment on the part of the student: this is where the Extended Project Qualification (EPQ) can play a key role in helping students with the transition to university by preparing them to understand, through personal experience, the demands of learning at university level.

The conclusion of the presentation was that, when looking at the requirements of an EPQ, it is clear that it helps develop useful skills for progression to university. However, the main merit of the Extended Project is the opportunity to experience the real meaning of independent learning, beyond the constraints imposed by the demands of the grades required for admission to university, and therefore to help reduce that disconnect that is one of the main issues for the transition between sixth form and higher education.



Working together

Extending your expertise in English

The first OCR English Conference for teachers of general qualifications from Entry Level to A Level was held in London in March. Our conference partners for the day were English and Media Centre, and the English department from Royal Holloway, University of London. The Conference headline was 'Extending Your Expertise', with the aim of the day to offer teachers of KS4 and KS5 a range of practical workshops run by the EMC and OCR subject experts, the opportunity to be updated on policy and qualifications development from Cambridge Assessment, while RHUL academics gave lectures and ran workshops intended to stimulate and inspire the teachers as English experts in their own right. Professor Robert Eaglestone asked *Why Read Criticism?* and Dr Eric Langley explored Shakespeare's *Theatre of Anatomy*, whilst Dr Anne Varty discussed *Feminism and Fairy Tales in* Angela Carter's *The Bloody Chamber*. Delegates enjoyed a taste of HE, and some academic refreshment in their subject area and feedback from teachers showed that they enjoyed the opportunity to be English experts for a day. Comments included "Eric Langley was mesmerising - great ideas, superb delivery," and "So nice to feel like a student again". The RHUL academics commented that the day was "constructive and informative" for them, as well as enjoyable. The OCR English team hopes to be able to build its working relationship with the RHUL English Department, to inform development and further HE engagement projects in English.

Making maths count

OCR held a 'pop-up' maths event in Cambridge in February 2013 to find out the views of users of maths on potential content and assessment approaches to maths post-16. A recurring point of interest at many of OCR's subject consultative forums over the last two years has been that many young people embarking on higher education and employment are unable to apply mathematics and statistics effectively, even when they have achieved good grades in mathematics at school or college. The 'pop-up' event was also an opportunity to develop greater understanding between the users of maths and maths specialists.

The day started with a look at a number of reports which have underlined the need for post-16 students, who have already achieved a grade C or above in GCSE Mathematics, to develop mathematical and statistical problem-solving skills in context:

- ACME's *Mathematical Needs* report shows a gap between the number of people who need mathematics and those who study it post-16.
- SCORE's report – *Mathematics within A-level Science 2010 examinations* – shows that for biology, chemistry and physics, the mathematical requirements that were assessed concentrated on a small number of areas (e.g. numerical manipulation) while many other areas were assessed in a limited way, or not at all.
- Ofqual's research 2012 – *Fit for Purpose? The view of the higher education sector, teachers and employers on the suitability of A Levels* – reveals that a lack of mathematical knowledge and lack of practice in mathematical modelling – using mathematics to solve real world problems – were common complaints amongst the interviewees with a physics background and, that the limited amount of mathematics in the A Level was seen to give students the wrong impression of the subject.
- Nuffield's report – *Is the UK an Outlier?* – highlights the low level of participation in mathematics post-16.
- Nuffield's follow up report – *Towards universal participation in post-16 mathematics: lessons from high-performing countries* – looks in detail at post-16 maths education in seven countries, and recommends that a new maths qualification is needed to encourage more students to study the subject after 16. The qualification should focus on statistics, mathematical modelling of real-life problems and general maths fluency and universities and employers should be involved in developing it.

At the over-subscribed day, OCR sought views, in particular, about a post-16 Level 3 qualification in Quantitative Methods that is being developed with Mathematics in Education and Industry (MEI) for students that have achieved a grade C or above in GCSE Mathematics but don't want to embark on an A Level in the subject. This development is in line with both Nuffield's and MEI's recommendations that new level 3 mathematics and statistics qualifications should be developed and trialled to ensure that coherent mathematical pathways are in place for all students with grade C or above in GCSE Mathematics but whose aspirations mean they do not wish to study AS/A Level Mathematics. Such students should be able transfer to AS Mathematics and beyond should their aspirations change.

Interested in getting involved?

OCR runs a series of consultative forums, a Higher Education (HE) strategic forum and subject consultative forums. The forums allow OCR to consult with key subject-based stakeholders so that their requirements and expertise can inform OCR's plans and developments.

The HE forum runs three times a year and the subject forums twice a year. Membership of the HE forum is solely from HE while the subject forums' membership comprises a range of people from across the subject community, including teachers, university academics, representatives from subject and professional associations, learned societies, charitable organisations and employers.

We want to hear and listen to a wide range of views – if you are interested why not join us at one of our forums:

OCR Consultative Forum Timetable 2013*

Business	23 May	21 November
Creative Arts	May (tbc)	Oct/Nov (tbc)
Economics		25 September
English	30 April	14 November
Geography	23 April	5 November
Health and Social Care	20 May	28 November
HE Strategic Forum	27 June	25 November
History	15 May	13 November
IT and Computing	25 April	17 October
Maths		8 October
Modern Foreign Languages		18 September
Psychology		2 October
Science	2 May	19 November
Vocational Applied Learning	24 April	8 November

* Please note, some of these planned dates may change.

If you would like to know more, please contact Sally Brown on **Sally.Brown@ocr.org.uk** or Annette Allen on **Annette.Allen@ocr.org.uk.**

Who we are

OCR (Oxford Cambridge and RSA Examinations) is a leading UK awarding body, committed to offering qualifications that engage learners of all ages, at school, college, in work or through part-time learning programmes to achieve their full potential.

- OCR is a not for profit organisation so success, for us, is measured through the impact and reach of our activities and the scale of our contribution to helping learners realise their aspirations.
- Our purpose is to work in partnership with others to provide qualifications that support education in ways which enable all learners to reach their full potential and to recognise and celebrate their achievements.

Each year more than three million students gain OCR qualifications, which are offered by 13,000 centres including schools, sixth form colleges, FE colleges, training providers, voluntary organisations, local authorities, and businesses ranging from SMEs to multi-national organisations.

OCR is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate, a department of the University of Cambridge The Cambridge Assessment Group incorporates three major exam boards: University of Cambridge International Examinations (CIE), Oxford Cambridge and RSA Examinations (OCR) and University of Cambridge ESOL Examinations (Cambridge ESOL).

In the UK, the Cambridge Assessment Group are the only public examination boards affiliated to a university. It plays a leading role in researching, developing and delivering educational assessment to eight million learners in over 150 countries every year.

CAMBRIDGE ASSESSMENT

UNIVERSITY of CAMBRIDGE
Local Examinations Syndicate

OCR Customer Contact Centre

Vocational qualifications
Telephone 024 76 851509
Facsimile 024 76 851633
Email vocational.qualifications@ocr.org.uk

General qualifications
Telephone 01223 553998
Facsimile 01223 552627
Email general.qualifications@ocr.org.uk

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www.ocr.org.uk