Assessment strategies: some comparisons between the UK and the US systems of higher education

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Presents a comparative study based on the first-hand experiences of two university lecturers who each spent a year lecturing at universities in the USA. Starts with an overview of the US educational system including both high schools and universities, and then concentrates on the differences in assessment strategies between UK and US higher educational institutions. Highlights the strengths and weaknesses of the two systems and assesses what the UK can learn.

Preface
The following account is based on our experiences of lecturing at US universities. Laurie Mullins spent the 1993-94 academic year lecturing in the department of management at the University of Wisconsin (Whitewater). Martyn Roberts spent the 1993-94 academic year lecturing in the department of computer information systems at Humboldt State University, California. Both assignments were part of one-for-one exchanges, whereby we swapped our positions at Portsmouth with our US counterparts. Spending a full year living, teaching and researching at the two universities, it allowed us time to gain an in-depth understanding of the operation of the US educational system.

Whitewater and Humboldt are broadly similar in character. Both are state-funded. State universities are generally small to medium-sized institutions. They offer mainly undergraduate courses, with some postgraduate courses up to the masters level. Their emphasis is on providing high quality teaching in science, art and business and they aim to provide students with a well-rounded education.

Introduction
The UK system of higher education is changing rapidly. The government is obliging universities to accept greater student numbers and to be more flexible both in the types of student they admit (e.g. more encouragement to mature students) and the ways in which courses are delivered. This has led to initiatives such as semesterization, unitization, accreditation of prior learning, and credit accumulation and transfer (CAT). For example, a recent report from Professor Robertson[1] of John Moores University, Liverpool, has drawn attention to the gathering momentum of CAT. At the same time, the government is holding the unit of resource constant, demanding that universities make improvements in efficiency and productivity. Student maintenance grants are also being held constant, and increasingly students are expected to obtain financial support for their education from loans, increased parental support and part-time work. Some of the ideas for these changes appear to come from the system of higher education in the USA. Ainley[2] refers to the switch of UK higher education under the Education Act 1988, from an imitation of the German system to an imitation of the North American system. Under the latter system, approximately 80 per cent of school leavers remain in some form of further or higher education.

As the UK moves towards a mass higher educational system, and an increasing number of school leavers remain in some form of further or higher education, what can be learned from the US system?

The US high school system
US schools do not prepare students for externally set examinations such as GCSE or A-levels. There is a system of continuous evaluation based on performance in tests given at intervals during the year, class participation, home assignments, etc. Students are marked in each subject from A (excellent) to F (failing). Marks are then consolidated from each subject to form the students’ grade point average (GPA).

The GPA is simple to derive and well understood. Most pieces of work that a student completes will usually contribute in some way to the student’s grade point average (GPA). The GPA system is used both at the high-school level and in higher education. Students will have both a high school GPA and a university GPA. The GPA is based on the computation of credits attempted and honour points earned. The marking system and credit points are based on the grading scale shown in Table I. For example a student who has undertaken 16 credits of work and received a total of 48 honour points would have a GPA of 3.00.

The GPA is simple to derive and well understood. Most pieces of work that a student completes will usually contribute in some way to the student's GPA. It usually gives a fair reflection of the student's ability because it is derived over a period of time and from a number of pieces of work covering a wide range of the syllabus.
The US higher education system

The US higher education system comprises two distinct types of institutions: two-year junior/community colleges are based in most towns and offer a range of vocational courses and associate bachelor degrees (the first two years of a full four-year degree programme). Many students start their higher education in these colleges (where tuition fees are generally less expensive), and switch to one of the other institutions to complete their studies. Four-year universities can either be publicly funded or entirely private (e.g. Stanford, California) and of these, many states make a distinction between those universities that are research-oriented with doctorate programmes, and those that are predominantly teaching-oriented with programmes limited to the master’s level.

The academic year may be organized on a trimester (quarter) system or, more commonly, on a two-semester system (September to December and January to May).

For most students, eligibility for admission to a college or university is generally dependent on achieving a certain minimum GPA. Alternatively, if the GPA is not quite high enough then the student may take national college admission tests (either ACT (American college testing programme) or SAT (scholastic aptitude test)). These are external examinations held at various regional centres a number of times through the year. The student may then be admitted on a combination of GPA and test scores. Universities may also require applicants to have completed a minimum number of units of high school work from a range of stated academic areas. Additionally, some states may have their own examinations which relate to admission and scholarships in their state colleges and universities.

There is no mandatory system of grants for either university tuition fees or for students’ maintenance assistance. Students may apply for federal student aid (grants are based on need and the financial circumstances of the family) and may receive scholarships and loans to help to meet their tuition fees.

Scholarships are awarded directly by universities as well as by fraternal, civic, labour and management organizations. The federal government also plays an important role in providing scholarships, loans and work. The Guaranteed Student Loan Program is generally available to everyone and allows students to borrow money at low interest rates. Students are normally expected to start repaying the loan within six months of graduating over a maximum period of up to 30 years.

A large number of students have to finance their own higher education and rely on some form of part-time employment to maintain themselves at university. Many students take time out of university to work and accumulate savings to finance the rest of their studies. Hence the majority of students take four- and-a-half to five years to graduate, but it can be much longer. Such students appear generally to accept the situation with good grace and to epitomize the strong American work culture. Virtually all professions in the USA require a bachelor degree as a minimum entry requirement and most students regard their financial investment in higher education as money well spent, one which will more than pay for itself by increased future earnings.

Accumulation of credits

To accommodate this need to transfer in and out of higher education and to encourage general student mobility among universities, an important element of the US higher educational system is flexibility. Credit for work is generally transferable from one university to another. A student can accumulate credits at one university, transfer them to a second and ultimately receive a degree from a third university. The only limitation is that to graduate from a certain university, a minimum number of credits (usually at final-year level) must have been awarded by that university.

Given the variable and flexible nature of university education, students are “classified” not by years of study, as such, but in accordance with the cumulative number of credits they have completed satisfactorily:
- freshman – up to 23.9 credits;
- sophomore – 24.00 - 59.90 credits;
- junior – 60.00 - 89.90 credits;
- senior – 90.00 and over.

Requirements for a degree programme

Most university degrees are awarded on satisfactory completion of a specified number of units which earn credits or points. The number of credits awarded for a programme (course) usually equates to the number of hours of work involved for the programme. For an undergraduate degree the standard

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Assessment in UK higher education

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A graduating senior who has achieved a GPA as set out below may receive one of three categories of graduation honour:

1. 3.85 and above: Summa cum laude;
2. 3.60–3.84: Magna cum laude;
3. 3.40–3.59: Cum laude.

Honours programme

Students of demonstrated superior academic ability may be offered the opportunity to enrol in honours classes. These classes are of limited size and allow students to explore subject matter in greater depth and range. To be eligible for the honours programme students must have a composite of 90 per cent or above on either the SAT or ACT; rank in the top 10 per cent of their high school; or have a university 3.40 cumulative GPA after 15 credits.

Graduate degree programme

For a graduate degree programme there is normally a requirement of between 30 and 60 credits taken over one to two years, depending on the nature of the programme and the student's earlier studies. Part-time, evening-only students may take up to four years to complete their degrees. The programme may include a thesis of, for instance, up to six credits. Conventional grades for graduate students are: A, A B, B, BC, C, D, F (= 4, 3.5, 3, 2.5, 2, 1, 0 grade points).

Assessment in UK higher education

The assessment framework operated by most UK universities for students on first degree programmes is that which has been handed down over the years and which originated from the ancient universities of Oxford and Cambridge. Towards the end of each academic year, the student sits a formal examination for each subject studied. The student is typically given a maximum of three hours to answer a number of questions on aspects of the subject.

The questions are typically a short statement requiring the student to discuss a particular issue or to compare and contrast different ideas/philosophies (there is some variation on this from subject to subject). Towards the end of the degree programme the student will sit a series of final examinations and the scores in these examinations will determine the grade or classification of degree awarded.

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minimum requirement is 120 credits (although 126 or 128 is more common) but this may be greater, up to 150 credits, for certain degree programmes.

The majority of units carry a three-credit rating and the average work load to graduate in a minimum of eight semesters (four years) is 15 credit hours: that is five courses at three credits each = 15 credits per semester \( \times 8 \) semesters = 120 credits. (A maximum of 18 credits per semester may be taken by a student who is in good academic standing.) To remain in good academic standing students must have an overall cumulative GPA of (say) 2.00 or above. Certain degree programmes may require a higher average or impose further requirements relating to, for example, major fields, that is, elective areas of more specialist study.

Students are typically required to complete a general studies programme of usually 30 credits selected from a combination of arts, humanities, natural science and mathematics; social sciences; physical education, ethnic studies and interdisciplinary courses. The general studies units are usually completed during the freshman and sophomore years.

At undergraduate level, any unit in which a grade D or F is awarded may normally be repeated (unless specifically identified as not repeatable). Only the grade of the second attempt is used in the calculation of the cumulative GPA but both the first and second attempt appear on the per manent academic record. This repeat policy to nullify the effect of the first D or F can be used only once for each unit. Units normally cannot be repeated at another university.

The flexible nature of the higher education system means that classes may contain a mixture of students, for example, sophomore, junior and senior. As a consequence, it is frequently the case that students do not know many other members of a particular class. This can impinge on the operation of seminar or tutorial work and restrict opportunities for group-based case studies, learning from shared experiences and the development of interpersonal skills. However, it does present students of different backgrounds and experiences with the opportunity to contribute in different ways.

Honours

A student earning a GPA of 3.40 or above in a semester (with no grade below C) and who has successfully completed a minimum of 12 credit hours of work that semester will be granted academic honours for that semester.
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However, it is still the case in most universities that scores from formal, time-constrained examinations compose the bulk of students' marks.

The individual lecturer for any particular subject has very little influence or control over the assessment framework for the subject. Any changes to the framework are taken by either of two committees. The board of studies is convened two or three times a year and comprises lecturing staff, students, and possibly external academics. Its purpose is to monitor the operation of the whole degree course. The board of examiners meets normally once a year, after the examinations have been sat, to consider the students' examination grades and recommend degree classifications. Changes can be made only with the authority of the whole committee.

The operation of the whole assessment framework is overseen by the participation of one or more external examiners. These are normally senior academics from other universities. Generally they play a passive role and are there mainly to ensure fair play at all stages of the assessment process and that a university is in line with national standards.

In awarding degree classifications most universities will usually attempt to distribute awards according to a standard normal distribution (although for good reason this is not always strictly followed). Thus, normally only a few students will get the very top grades, a large number of students will get middle grades, and a small group will get low grades.

Assessment in US higher education

The US higher educational system is generally more diverse than the UK system. With a mixture of both private, public, teaching and research-oriented universities (not to mention the differing politics and cultures of different states), assessment frameworks can differ widely from one institution to another. There is no one national/federal assessment framework. Within each institution an individual lecturer is given almost total freedom to decide the assessment framework for a particular course.

Some institutions insist on some form of final evaluation towards the end of a course, but the exact content, length and structure of the evaluation is left to the discretion of the individual lecturer. In addition, the final evaluation is often only one of a number of evaluation exercises which make up a student's grade for the course. The lecturer is at liberty to decide the number, length, style and weighting of other evaluation exercises. Only rarely will the final evaluation be the sole method of evaluation. Some lecturers may go as far as a graded assessment exercise every week although most lecturers will use a compromise of three or four assessment exercises throughout the duration of the course. Usually no project or dissertation is required at undergraduate level.

There are no boards of study, boards of examiners or external examiners in the US higher educational system. Each lecturer has complete control over any assessment exercises. At the end of a course the lecturer consolidates the marks from the various assessment exercises and sends a single, final mark for each student, to the university's central administration.

The types of assessment exercise differ widely and may include self- and peer assessment. There is a very much greater use of objective testing in the US system. These tests comprise a number of multiple-choice, true/false or short-answer quizzes. Questions are usually drawn largely from the test bank in the Instructor's Manual accompanying the recommended text. The answers are written on to pre-printed forms which can be read and marked by an optical mark reading (OMR) (scantron) machine. The consolidated mark for each student is also written onto OMR sheets to be sent to the university's central administration. Thus, lecturer time spent grading is kept to a minimum.

Some comments on the two methods of assessment

In the UK system students are often only called to account for their learning by a single examination at the end of a course. This all-or-nothing approach can pose considerable stress for students, which some students are able to cope with better than others. The result is that it does not always reflect an individual student's knowledge or ability if the student simply happens to have an "off" day on the day of the examination. It does not always encourage students to work consistently through a course and can make it difficult for a lecturer to guide a student's progress.

The common assessment framework used by the majority of UK universities results in a uniformity and comparability of degree programmes. Within a degree programme most subjects will be assessed in a similar way. The style of questions usually gives the student the freedom to analyse, criticize and to develop an argument. Thus the system is generally considered a good test of the student's intellectual ability.
The administrative process of the UK system (with the involvement of external examiners and examination boards), can be extremely lengthy, time consuming and expensive. The US system is certainly simpler to operate and administer. All assessment exercises are administered by the individual lecturer who has absolute discretion over the final grades awarded. External examiners do not exist. The lecturer submits final grades to the university’s central administration where they are averaged with final grades from other units to form the student’s GPA.

Although the US system is simpler to administer, grading standards can differ widely. Not all lecturers use a standard normal distribution in awarding grades. It is perfectly feasible to skew the distribution. The lecturer is not tied to a predetermined framework and can construct a unique assessment framework for a unit to reflect the style of the unit and also the lecturer’s own preferences.

The use of objective testing allows the lecturer to test the knowledge of a large number of students in a very straightforward fashion. Marking is fast with little scope or need for subjective opinion. The simplicity and efficiency of objective testing allows the lecturer to set a number of short tests during a unit. This is usually preferred by the students who are given a number of opportunities to demonstrate their knowledge. However, it can be argued that it involves little academic or intellectual rigour on the part of the student. The student is not required or encouraged to develop ideas or opinions in a critical or original way.

### Conclusion

UK universities are being encouraged to become more flexible and at the same time to improve efficiency and productivity. The US system of higher education has for a long time catered for a wide range of student backgrounds and experiences and is designed for a society where most school leavers go on to some form of higher education.

A feature of the US system of education from high school to university level is its simplicity with respect to assessment strategies and standards. Any unit that a student studies will count in some way towards his/her GPA. The simple grading structure and the lack of external interference make the US system relatively simple to administer. The US system gives lecturers far more freedom to decide their own assessment framework. Lecturers can use this freedom in determining the style of their courses and their own assessment preferences. Objective testing is used extensively and multiple assessment exercises tend to be favoured by students. We did not find this had any significant impact on standards. On the whole, the better students still came out on top in the US system with higher GPAs, and most courses still maintained a standard distribution of grades. The administrative process of arriving at these grades was however, far simpler, less time consuming, and more easily able to cope with large student numbers.

The UK system is generally more uniform and allows better comparisons to be made between courses and institutions. Individual lecturers have little freedom of control over the means of assessing their subjects. The system is generally regarded as academically rigorous. However, the UK framework is generally time consuming and expensive to administer. It is generally labour intensive and, in our opinion, it will not survive if we are to move towards a leaner, more flexible climate of mass higher education.

### References