

## Response Form – Accelerated Courses and Switching University or Degree: Call for Evidence

We welcome responses to the questions below (any or all) as well as any other comments respondents may wish to make.

A copy of this call for evidence can be found at:

<https://www.gov.uk/government/consultations/accelerated-courses-and-switching-university-or-degree-call-for-evidence>

You can complete your response online at:

<https://bisgovuk.citizenspace.com/he/accelerated-courses-and-switching>

Alternatively, you can e-mail or post the completed response form to:

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The closing date for responses is 19 July 2016

Information provided in response to this call for evidence, including personal information, may be subject to publication or release to other parties or to disclosure in accordance with the access to information regimes. Please see page 8 of this call for evidence for further information.

If you want information, including personal data, that you provide to be treated in confidence, please explain to us what information you would like to be treated as confidential and why you regard the information as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the department.

I want my response to be treated as confidential

**Please note: Only Part C of the form has been completed as this is a response by a Professional Body rather than a student body or a Higher Education Institute.**

## ALL OTHER INSTITUTIONS

### Your details

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Role: Higher education professionals responding on behalf of their professional body

Organisation: The UK Institute of Physics and Engineering in Medicine ([www.ipem.ac.uk](http://www.ipem.ac.uk)), the UK professional body for physicists, engineers and technologists delivering healthcare, with over 4,000 members working in the NHS, universities and industry.

IPEM have also recently responded to the Wakeham review and to the recent TEF green paper consultation (“Fulfilling our potential: teaching excellence, social mobility and student choice”) as well as its Year Two TEF Technical Consultation.

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**Q1: What would the impact of a credit transfer system be on the higher education sector? *If you reference other sources in your answer please state the name of the source.***

An effective credit-transfer system allows students more flexibility to complete their degree qualification across more than one institution, and possibly over a longer timescale. This is particularly useful for mature students who are balancing work roles with part-time study. Both of the authors have extensive experience at running UK distance learning programmes that attract such a cohort of students, who are balancing work and study, at a postgraduate level.

Such mature students, often in their late 20s to early 40s, are often up-skilling (to acquire more advanced knowledge/skills) or re-skilling (perhaps to focus their expertise in a varied field or sub-specialism). This is now typical of early to mid-career roles within Standard Occupational Classification (SOC) groups 1-3 (i.e. at a managerial professional or technical level), which tend to require a postgraduate qualification level and continuing professional development (CPD) to gain promotion and acquire new skills that facilitate career specialisation. It is not normally possible to acquire this postgraduate education in a full-time campus-based study format without leaving permanent employment, leading to two common alternatives:

- 1) Students study part-time (over 2 or 3 years, normally) completing a proportion of the degree award each year to a previously agreed timescale and paying that proportion of fees each year.
- 2) Students study flexi-time, completing modules at their own pace, and paying pro-rata fees, with a maximum time limit of award, normally 5 years. This route can often be supported through distance or online learning.

There are examples where such flexible arrangements are still insufficiently malleable to support students as they balance study alongside a career. Common life changes in late 20s to early 40s include having children, being promoted to a senior workplace role that requires sudden enhanced workload, getting married and buying a home and moving location in the UK (or abroad). These normal life events necessitate a sudden change in the balance of work and study, the hours available for private study, and the location where the student can receive instruction. Often such students will drop out of a part-time course, or drastically modify their study pattern for flexi-time over a number of years, again risking non-completion.

Better support for mature students might be offered through the establishment of a streamlined, robust, cross-institutional credit transfer system, perhaps administered by the new Office for Students, in which students can apply to use their achieved academic credit from completed modules at a previous university towards furthering academic credit at their new institution. This process exists already in most university academic regulations as APL (Accreditation of Prior Learning). However, APL regulations are complex and burdensome for course directors, often taking up to an hour or more per application in administration time, making it unpopular among academics and discouraged by managers due to its administrative impact with no guarantee of success for the applicant. There are also limits on the number of modules or academic credits that can be transferred into each degree at each university, making the process limited in recognising prior learning.

Most higher education institutions will have a maximum time limit to complete a flexible taught degree – five years in many instances (UCL, University of Surrey), but longer in other institutions, for example, the Open University. This may need changing sector-wide to make career-long credit transfer practical.

If credit transfer is to be effective there must be a clear distinction between *general credit* (e.g. equivalent to first year of a named degree) and *specific credit* (e.g. exemption from particular modules of a degree). (See next response)

**Q2: By what mechanisms could a system of credit transfer be more effectively embedded across the sector? If you reference other sources in your answer please state the name of the source.**

The White Paper notes that academic credits are not a universal currency. In one sense they are: in the UK there is an accepted rating system called Credit Accumulation and Transfer Scheme (CATS) that sets 10 hours as the required amount of student notional effort for one CATS point. (The number of CATS points taken by a full time student in one year is normally 120, or 1200 hours.). This is complimented by the definition of the level of academic study, given by the Quality Assurance Agency Framework for Higher Education Qualifications (FHEQ), i.e. first year undergraduate (FHEQ level 4), masters level (FHEQ level 7) etc.

This system allows for comparison of the level and the amount of work between different university programmes. It also allows for comparison in terms of study hours with modules at universities in the rest of the EU, where a similar system of ECTS points is in place (with one ECTS point equivalent to 2 UK CATS points).

However the key point is that in another, important, sense they are not a universal currency. A student transferring from one university to another, but studying for a degree with the same title, will be very unlikely to find that the modules of one are a good 'match' in terms of academic content. Thus, while it is relatively easy to determine whether or not a student who wishes to transfer has achieved the right number of CATS points at the right FHEQ level (general credit transfer), it is much harder to determine whether s/he has covered the right prerequisite material to be able to cope with modules offered next at the new institution (specific credit transfer).

Comparison between the taught content in one institution against that in another is much facilitated by processes of course accreditation. As accredited courses have already been independently assessed as meeting certain educational and learning environment standards, as well as matching certain educational content through delivering broad standardised learning outcomes, it is easier to 'tick off' parts of accredited courses as complete when applying credit transfer – the matching process is far simpler. The benefits of accreditation have also been highlighted by the May 2016 Wakeham review as being important in increasing the employability of STEM students and the engagement between universities and employers.

([https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/518582/ind-16-6-wakeham-review-stem-graduate-employability.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/518582/ind-16-6-wakeham-review-stem-graduate-employability.pdf) )

This response suggests that credit transfer could be better implemented across higher education in fields where accreditation standards by external professional bodies (like IPEM or the Institute of Physics) are established and widespread.

**Q3: What do you see as the main barriers to a more extensive credit transfer system? If you reference other sources in your answer please state the name of the source.**

Several barriers are cited in the White Paper; here we comment on some of them:

**1. Credits are not a universal currency:**

This has already been commented on in the previous answer. From our experiences in the field of medical physics and biomedical engineering, an accreditation system does much to standardise the learning outcomes of different courses and this makes it much easier to compare the students' achievements. However it is important, especially at post-graduate level, to allow universities to build on their own strengths so that their degrees may specialise in one particular area of a subject. Hence accreditation schemes should not be so rigid that they do not allow any specialisation i.e. they should permit a component of core modules (that are appropriate for specific credit transfer) as well as specialised taught modules that are bespoke to each higher education institute's local strengths (which may not be realistic to credit transfer, and if so, only as general credit transfer).

The two authors co-wrote a professional body accreditation framework in 2012, with defined core and specialised module content, which is now rolled out nationally and which is beginning to undertake international accreditation activity. It is outlined here:

<http://www.ipem.ac.uk/CareersTraining/IPEMAccreditedcourses/MastersDegreeAccreditation.aspx>

## **2. Bureaucratic burden:**

It is relatively easy to determine whether a student has completed the right number of credits at the right level so 'general credit transfer' is relatively straightforward, although it does require each case to be considered individually and, if the student wishing to transfer has been educated outside the UK, requires comparison with the standards in their home country with those in the UK.

'Specific' credit transfer is much more of a bureaucratic burden. Whatever administrative system may be in place, the transfer of specific credit will inevitably require a dialogue between administrative staff and senior academic colleagues who are often too time-pressured to discuss single applications (see question 1). The programme director will personally have to complete the paperwork for each student and match learning across two institutions. This forms the basis of the APL system (see question 1), which is not popular with university academics or administrators; it is very time-consuming to arrange for an applicant who may still not choose to come.

A centralised UK-wide credit transfer system, in which the student (rather than the academic) applies for credit transfer through an independent system, demonstrating equivalence to academic credits on another UK taught course, might offer a solution to this issue. This could conceivably be administered by the new national Office for Students to best represent students' interests.

## **3. Other barriers – inability to exit part-way through a qualification:**

One regular outcome for a student whose circumstances change part-way through a taught programme is to exit the degree before completion. To do so without any kind of recognition of academic achievement is depressing for the student and also, if the student has done well thus far, unfair for all involved. It is often possible for a part-way exiting student to gain a different qualification; for example a student who has successfully completed 120 credits (two thirds) of an MSc can usually exit with a Postgraduate Diploma (PGDip), and 60 credits (one third) with a Postgraduate Certificate (PGCert). The establishment of part-way qualifications in all higher education programmes needs to be encouraged across the UK sector.

In addition, the prestige of a student holding a part-way qualification needs to be increased. In the authors' view, these are normally seen by employers as secondary in prestige to a full award, perhaps indicative of the student failing modules and therefore not meriting the full award. A change is needed in the perceived status of part-way qualifications so that they are considered as progressional towards career development rather than being seen as final and second rate (i.e. the student has obtained an exit award but may further it at an opportune time later in their career to a more advanced award). In the example above, a PGCert award from a student may be advanced onwards at a future date, perhaps at a new institution, into a PGDip or full MSc. A robust, defined credit transfer system would support this. It would require generous time limitations on how long past awards could be progressed: those who leave their profession to raise children can often return to study or practice after more than 5 years. 5 years is usually seen as a time limit at a number of UK universities for granting awards (see responses to question 1).

#### **4. Lack of information:**

There is now a wealth of information for students that is freely published by universities about HEI programmes, including their student satisfaction (NSS, PTES), academic intensity and employment outcomes (Unistats) and overall course quality (external examiner comments are now often published). The authors believe that information is sufficiently available to inform student choice.

However, what is lacking is flexibility by the higher education system to support students who want to change their taught programme due to career specialisation, a change in their location within the UK, or changes to their personal circumstances that modify their required mode of study (full-time, part-time etc.). One driver of this change is the increased tuition fees that may increase the average age of students in higher education, or which may support more demand to study part-time while in employment. At postgraduate level, the need to attain qualifications while working is highlighted for SOC groups 1-3 (see response 1). This is making changes in students' personal circumstance a barrier to progress, and information on how to adapt studies with changing life situations is what is really needed rather more information about which programme to choose, which is already well provided through Unistats, NSS, PTES etc.

#### **5. Inertia:**

In our field, engineers and scientists have to study for more than one degree to be professionally qualified. They will also need to undertake continuing professional development (CPD) for the rest of their career by attending courses and conferences and undertaking further training. Thus a university degree in our field, and possibly other professional or scientific/engineering fields, is far more than a "one off purchase" – it is carefully-chosen part of a professional's continuing progression.

The perception of higher education needs to change, as it partly has already in our field, from qualifications being finalised at a definitive study period in one's lifetime, into a more professional status, where qualifications can be built up over time and furthered, perhaps as the individual specialises in his or her career. Previous answers by the authors suggest ways that accreditation processes could make this process easier to administer for qualifications at different higher education institutes.

**Q4: Are there any lessons we can learn from international credit transfer models, e.g. from the US?** No answer is offered—outside the author's expertise.

**Q5: What do you see as the barriers to more accelerated degrees being available?**

While accelerated degrees may have their place under some circumstances there are considerable difficulties and negative effects:

1. There are considerable difficulties in cases where the degree requires some element of professional practice. The professional practice element ideally needs to mesh with the taught content so that students learn the theoretical and practical aspects of a topic in tandem, as best as is practicable. This is hard to achieve with an accelerated degree and, in the case of IPPEM members training in hospital science/engineering, and thus degrees are frequently offered part-time.

2. Accelerated degrees deny students a summer or winter break between years, in which they can often gain thinking time to consider career options or to undertake work experience, or to simply recuperate from intensive study.
3. Accelerated degrees also place stress on the teaching staff in the university. Most teaching staff are also active researchers and need time to carry out their research, attend conferences and write papers to stay at the forefront of their field, and indeed develop and prepare their next year's teaching content. In the technology-enhanced educational landscape of 2016, taught content requires virtual learning environments, digital lecture theatres and other classroom innovations. Installation time (normally summer or Easter) is also needed by university professional services staff to perform upgrades to classroom technology and introduce upgrades. Also, a year-long, intense teaching load makes sustained excellent teaching extremely hard to achieve and thereby reduces the research insight of teaching staff and the academics' job satisfaction.
4. It is a widely-held view amongst experienced teachers that material taught over a longer period of time and mixed with other teaching or with rest/reflection time ("interleaving") is retained better by students than material taught rapidly over a short "block" period. This is addressed in educational research through the concept of the spacing effect. Briefly, concepts studied once and restudied after a delay are recalled far better than those studied and restudied in quick succession (Cepeda *et al.* 2008 <http://www.ncbi.nlm.nih.gov/pubmed/19076480>). Accelerated degrees reduce the educational effectiveness of instruction by removing natural opportunities for exploiting the educational spacing effect. Furthermore, a longer degree period promotes enhances intellectual and social maturity, which itself develops better workplace and non-cognitive ("soft") skills.

**Q6: Where have you seen attempts (successful or otherwise) to overcome those barriers either in the UK or overseas?**

There is currently a serious shortage of Clinical Technologists in the NHS. These are technical staff who maintain vital equipment such as cancer treatment machines and radionuclide generators, as well as conduct patient diagnostics and tests. This is largely due to considerable problems in recruiting school-leavers to undertake the appropriate BSc degree in clinical technology, which is more attractive as a career path for a re-skinner. Such recruits have typically worked in their career with related technologies such as radar systems or generators, often being ex-armed services.

One way that this NHS staff shortage has been alleviated is to offer re-skilling graduates of degrees in the physical sciences the opportunity to take a Graduate Diploma in Healthcare Science (Nuclear Medicine, Radiation Protection or Radiotherapy). This course, which is offered by the University of Cumbria, allows students to use their first degree (from another university) to gain entry onto a single year 120 CATS point diploma (a Graduate Diploma, "GradDip") that mimics the final year of a clinical technology degree, assuming that physical science graduates will already have prior learning in core content from years one and two. This provides recognised qualification for a career as a Clinical Technologist using the principle of recognition of prior learning. The students study for the diploma part-time while working in the NHS and this has proven to be an excellent method of training good technologists in a manner that recognises their prior learning. However, it is currently under threat of discontinuation due to changes in the funding of NHS training.



IPEM is the Learned Society and professional organisation for physicists, clinical and biomedical engineers and technologists working in medicine and biology aiming to advance physics and engineering applied to medicine and biology for the public good. Physicists, engineers and technologists play vital roles in delivering our healthcare and IPEM is the professional organisation that represents this workforce.

Its members help to ensure that patients are correctly diagnosed and safely treated for illnesses such as cancer and stroke. They also maintain and manage medical equipment such as MRI and ultrasound scanners, X-ray machines, drug delivery systems and patient monitors. Their research and innovation leads to new technologies and methods that advance medical treatments. IPEM is also a charity with around 4,000 members from healthcare, academia and industry.

More can be found at <http://www.ipem.ac.uk>