Response to the questions and comments sought about recruitment and retention of teachers for Scotland's schools. Susan V McLaren, Senior Lecturer Design and Technology Education, Moray House School of Education, University of Edinburgh.

I write from a Teacher Education Perspective. I have been involved in Teacher Education at Strathclyde University and Edinburgh University with the specialism of Technological Education/ Design & Technology teacher (D&T) Education for over 23 years in total.

Key issues
- Recruitment problems
- Pre-requisite demands
- Guarantee of being placed ‘locally’ for school experience
- Non-completion of PGDE

Recruitment problems

- There appears to be very limited promotion and marketing related to D&T teaching and what this comprises in the school construct. i.e. Engineering Science; (Product) Design and Manufacture; Graphic (Design) and Communication; Practical Wood working; Practical Metal Working; Practical Electronics. There appear to be limited understanding of the contribution and value of this curriculum area, not only in Senior Phase, but at BGE Craft Design, Engineering and Graphics and Technological Developments in Society and Business. It was acknowledged by Education Scotland in March 2015, that there was a branding issue with the CfE ‘Technologies’ as a whole.

- Any STEM promotion and discussion tends to focus more on Science and digital technologies and less on Design & Technology (D&T), Technological Education, Technical Education, Design Engineering Technology (DET). [The range of nomenclature used in different schools and councils does little to clarify.]

- Media Headlines in England relating to the demise of D&T in schools feature in Scotland and can be misleading for those not appreciating the major differences in Scottish Curriculum and Education as a whole.

- I note that the Workforce Planning Target for PGDE Technological Education starters in August 2017 is stated as 124. Edinburgh University have set a recruitment target 14 students to their PGDE Education/ Design & Technology. [There appears to be some reluctance in taking on additional staff to help meet the country’s needs in this respect.] However, at Moray House School of Education, Edinburgh University, at present numbers of applicants for entry to the PGDE D&T in August 2017 is less than 25 in total. Offers have been made to 13 and we have received 2 acceptance to date. This renders this issue of additional staffing redundant at this moment in time.

- Incentives for suitably qualified candidates to leave current employment, or to consider D&T teaching as a career when made redundant would perhaps help. Bursaries for undertaking and the course may be attractive for some that are keen, for the right reasons, but have too many responsibilities and financial commitment to return to being
a student. I am aware that more councils are seeking to use the concept of ‘golden hello’ to attract teachers to work in their area. The majority of PGDE D&T candidates are mature with additional responsibilities of partners/ families which makes them slightly less flexible for relocation than perhaps those. However, I am also aware that many NQTs are securing more than one post and making the decisions as to which to accept. This is leaving schools ‘in the lurch’ – i.e. school management / councils thinking a post as been filled to then be informed that the candidate is going elsewhere. The nationwide shortage of Technical/ Design & Technology/ Technological Education teachers is having a serious impact on the curriculum experience young people receive, as the current shortage is resulting in schools not having teachers to take BGE CDEG classes, or the senior phase classes the young people are interested in pursuing.

**Pre-requisite demands for entry to PGDE**

- Those interested in D&T teaching have specific pre-requisites to meet for entry, as determined by the GTCS memorandum 2013.
  
  Technological Education
  
  Applicants must have a degree with at least 80 SCQF credit points. A minimum of 20 credits should come from list A and a minimum of 40 credits should come from list B.
  
  List A
  
  Technological subjects such as mechanical, electrical or electronic engineering/ sciences, mechatronics, architecture, construction technology, building services.
  
  List B design and graphics related subjects such as computer aided design, graphic design, computer aided design manufacture, industrial design, product design.
  
  Applicants have to prove to the university that they can build up practical skills

This does result in several D&T degree holders (e.g. some Product Design, Digital & Visual Graphics Design) being obliged to do 20 credits ‘top up’ by undertaking a more engineering related module prior to being offered entry to teacher education. This can be renewable energy, mechatronics, electronics, mechanics, structures, programmable control systems/ coding for example. There needs to be more flexible approaches to enrolling on these HNC modules, or perhaps these could be gained as part of the probationary year? Thinking more creativity may help increase the pool of applicants.

Often Engineering degree holders do not have English Higher C or equivalent due to them majoring in school on Technical and Science subjects. There are some FE colleges offering Literature 1 and Communication 4 (distance learning and face to face), however these courses are often oversubscribed and it proves difficult to secure a place, esp. in the time frame that works for the prospective applicant.

I am currently tackling some internal (Edinburgh University central admissions team) system issues. These pertain particularly to equivalences accepted for entry. They are placing some unnecessary additional burdens on applicants and are making ill-informed judgments. This has resulted in applicants being rejected and this then limits additional applicants who may have heard of such incidences.
Guarantee of being placed ‘locally’ for school experience

- **School placements.** The two largest centres for PGDE D&T are Strathclyde and Edinburgh universities. The PGDE programme comprises 36 weeks total with 18 weeks in **school placements.** There is an issue with placing students for these block experiences. D&T applicants tend to be mature candidates, making a career change. It is essential that they can be placed close to their home addresses. This includes those that may be temporarily living close to campus for those week days, but returning to home for placement and weekends. **The partnership model does not work for these students.** (Edinburgh University states 6 councils where students will be placed, and yet at interview, this is what attracts the most concern and questions form students living outwith these council.) There needs to be additional funding (for tutor visiting budget), or a greater understanding that the universities serve the whole of Scotland, should not be so parochial, and as such students living in Dundee and further north ought to be placed in schools closer to their home address. UHI do provide a unique model for Teacher Ed of D&T. Candidates ought to have the choice.

**Non-completion of PGDE**

**Student teacher attrition / non-completion of PGDE programme** is most commonly due to one of three reasons-

1. **Study, reading and academic writing to evidence secure understanding of the complexity of what it means to be a teacher, taking into account the underpinning and interconnected areas of psychology, sociology, and pedagogy.** Many of the PGDE D&T students who arrive from an initial discipline of engineering and product design engineering based degree/industrial experience, find this taxing and the social science approach to action research and critique very challenging. Therefore there are those who do not achieve the require standards for a pass at Masters level modules, or withdraw from the programme voluntarily due to them personally not ‘buying into’ the necessity of this study to ensure they commence of the path to being a teacher.

2. **Placement experience is entirely different from their prior-experience of working with young people e.g. mentoring apprentices, sports coaching, volunteering or STEM ambassador contribution, as is required for acceptance to the PGDE.** The beginning teacher realises the complexity of being a teacher and a member of the school community and commitment required overall and withdraw voluntarily/are required to withdraw due to unsatisfactory school reports as they struggle to perform on school placement.

3. **Personal circumstances are often the key reasons for non-completion of the PGDE programme e.g. Illness (most commonly depression, stress, anxiety related) and/or financial hardship.**

Another issue is a last minute withdrawal from the programme (often a week or so before the programme commences) due to taking an industrial / commercial contract that is ‘too good to pass up’. This is particularly true of architectural and engineering applicants.