

27 JUNE 2013

# PRE-ITT SUBJECT KNOWLEDGE ENHANCEMENT

RESPONSE TO THE NATIONAL COLLEGE  
FOR TEACHING & LEARNING PROPOSALS



GATSBY

## INTRODUCTION

- 1 Gatsby is a foundation set up in 1967 by David Sainsbury (now Lord Sainsbury of Turville) to realise his charitable objectives. We focus our support on the following areas:
  - Plant science research
  - Neuroscience research
  - Science and engineering education
  - Economic development in Africa
  - Public policy research and advice
  - The Arts
- 2 Over the last decade Gatsby has spent in excess of £4 million developing and supporting a number of major programmes to improve the recruitment and retention of physics teachers, including working in partnership with government and others to pilot the first Subject Knowledge Enhancement (SKE) courses for both pre-initial teacher training (ITT) and for serving teachers lacking a physical science specialism.

## THE IMPORTANCE OF SKE

- 3 SKE courses have been one of the most important factors in the recruitment of teachers of shortage subjects. Last year just over 20% of trainees entering physics initial teacher education came through an SKE course. The courses allow graduates who do not hold a degree in physics or chemistry (and some other difficult to recruit to subjects) to enter ITT and this allows for recruitment to the profession from a much wider degree pool than would otherwise be possible.
- 4 We are concerned that the changes proposed by NCTL could result in fewer SKE places being offered and/or a reduction in the quality of SKE provision. Such changes could potentially have a significant negative impact on the number and quality of specialist teachers in UK schools.

## ALLOCATION OF SKE PLACES

- 5 The NCTL proposals suggest that, with the exception of outstanding providers, SKE places should be allocated in proportion to the number of ITT places provided. We believe Schools Direct is more likely to fill its vacancies with trainees who already hold a degree in the subject they will teach and schools may therefore not need to use their full SKE allocation. Similarly, some large outstanding providers may choose not to offer SKE, resulting in a potentially significant fall in provision. We recommend the NCTL considers simple mechanisms to allow other ITT providers to bid for unused SKE places to ensure there is not a reduction in the overall number of places available in any given year.
- 6 The first SKE courses were delivered by HEIs as a regional service. Potential teacher trainees would apply directly to an ITT provider who would then refer applicants to an SKE course in their region if it was felt additional subject knowledge support was needed. This system could work well within the new teacher training landscape, but central support is required to ensure regional consortia are formed and provision is not lost.

## STRUCTURE OF SKE

- 7 We welcome the suggestion that SKE courses could be taught in a more flexible way using summer schools and distance learning. However we are concerned about the prospect of SKE

courses being delivered in parallel with ITT. The ITT year is already extremely full and trainees often find the workload onerous. Having ourselves piloted and evaluated several enhanced versions of ITT courses over the years, we are convinced that it is not possible to add sufficient subject knowledge training into existing teacher training programmes.

### QUALITY OF SKE PROVISION

- 8 New providers of SKE courses will need significant guidance to diagnose shortfalls in existing subject knowledge and to determine the support required for each individual trainee. Even if schools or ITT providers are not directly providing SKE, they will need support to understand and procure the correct type and amount of subject knowledge training required.
- 9 Furthermore, the current SKE system relies on a shared understanding, held by a relatively small number of HEI providers, of the breadth and depth of subject knowledge required to be a specialist teacher. If provision of SKE courses is to be further fragmented, as current proposals suggest, we are concerned that this shared understanding will become diluted, leading to poor quality provision. Our experience suggests that in such a situation misconceptions and poor teaching concepts will unintentionally be passed on to new teachers. However a potential remedy exists: subject knowledge tests could be used to determine the level of subject knowledge required to become a specialist teacher. Such tests would allow SKE to be delivered in a variety of ways while ensuring common outcomes and standards.
- 10 Gatsby has been working with the Institute of Physics (IOP) and the Royal Society of Chemistry (RSC) to develop a physics and chemistry subject knowledge diagnostic tool. The online tool contains a large bank of questions specifically designed to probe deeply into subject knowledge and identify misconceptions. ITT tutors can either use the tool to create their own tests for their trainees, or to administer tests created by the IOP and RSC. These tests could be used to help new providers or administrators of SKE determine the type and level of subject knowledge trainees require. It would also be possible to create a test that could be administered at the end of an SKE course to determine whether an individual has achieved the required level of subject knowledge to become a specialist teacher.
- 11 We would be pleased to work in partnership with NCTL and appropriate subject associations to provide a subject knowledge diagnostic testing tool for providers of SKE courses and to develop a common assessment test for participants completing the courses.

### CONCLUSION

- 12 The introduction of SKE courses is a significant factor in the recent rise in recruitment in the shortage subjects. We urge the NCTL to ensure that sufficient high quality courses remain available each year in order to maintain the recent levels of teacher recruitment.
- 13 We would welcome the opportunity to discuss with the NCTL the points raised in this submission and the potential for our online diagnostic tool to support quality SKE provision. Comments and questions regarding this submission should be addressed to:

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