

REVIEW OF RESEARCH EXPERIENCE PLACEMENTS 2010



Introduction

1. BBSRC Research Experience Placements (REPs) are intended to raise the profile of bioscience research careers amongst undergraduates and provide students with an opportunity to experience first-hand a period of full-time research. REPs are carried out in a UK university or other research organisations during the summer vacation.
2. The REPs scheme expanded in 2010 to provide 200 placements across 88 departments in 46 research institutions. The allocation of these REPs was approved by BBSRC's Bioscience Skills and Careers strategy panel in January 2010. A summary of the allocation of REPs in 2010 is provided at **Annex 1**.

Review of Research Experience Placements in 2010

3. Report forms were received for each student who participated in a REP in 2010; each was completed by both the student and their supervisor. Receipt of forms provides the basis for departments receiving funding for the placement. A total of 160 forms were used to review the scheme.
4. In general, comments received were extremely positive, with the support seen as a very effective way of providing research experience to enthusiastic undergraduates. Most awards were taken up by the awarding department, and students reported that they gained valuable experience and developed skills of relevance to pursuing a career in research. Selected student quotes taken from the reports are provided at **Annex 2**.

Basic information about the student and the placement

5. 64% of students taking a REP were female and 36% were male.
6. Most REPs were 8 to 10 weeks in duration (83%), with a smaller number lasting up to 7 weeks (14%) and only a handful less than 4 weeks (3%).

Support for undergraduate summer placements

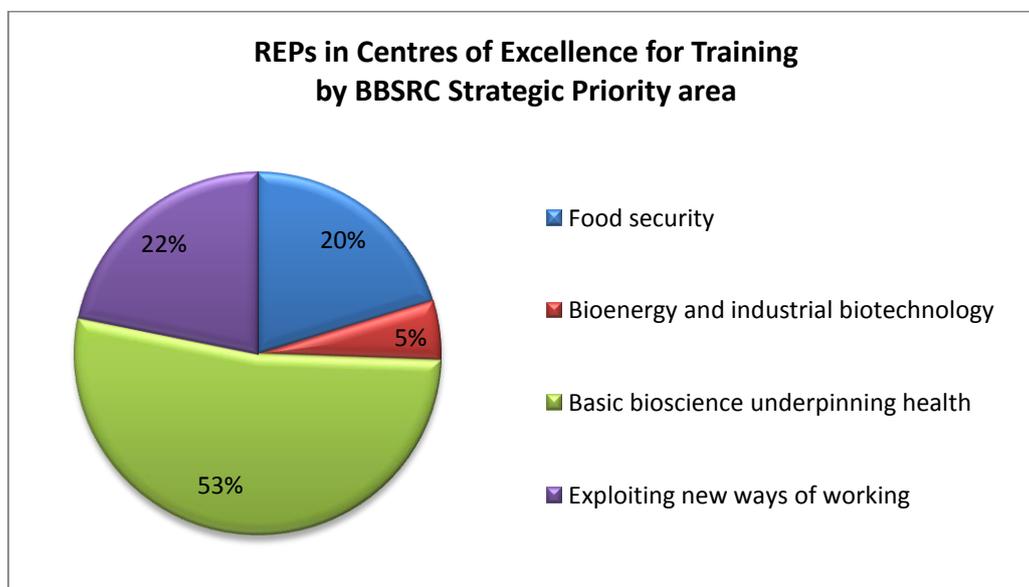
7. REPs are one of a number of sources of funding available to support undergraduate students for summer research projects. There is considerable variation in the total number of research placements available to undergraduates, with some institutions reporting that BBSRC REPs were one of a number of sources of support for undergraduate placements and others relying only on BBSRC funding.
8. Some departments used the funding to support more than the notional number of REPs associated, by co-funding from other sources. Similarly, some departments described the added benefits of supporting multiple summer research placements, as this provided a cohort where experiences were shared and each individual gained a wider knowledge of research in practice across multiple research topics. BBSRC welcomes the use of REPs in this way.

Skills gained in taking a REP

9. When asked why the students carried out the REP, most wanted to gain experience of practical research skills, learn about lab environments and get experience to put on their CV.
10. Other reasons for taking a REP included: to contribute to research; to inform a decision on or confirm an interest in doing a PhD; to count towards veterinary extramural studies; “for fun”; to gain practical skills above what would be offered in their degree; and to prepare for their final year project or industry placement.
11. Students reported that a broad range of skills were developed during their REP. Most increased extensively their practical lab skills and project or time management skills; many also improved their data analysis or mathematical skills. Other skills were also developed, although this varied depending on the research area; for example, some students developed animal handling skills to a significant extent, whereas for most students this was not applicable.
12. Other skills gained included: communication, presentation and interpersonal skills, including with farmers, field workers or involvement in lab meetings; learning to work independently and/or as part of a team; problem solving and using one’s initiative; and adaptability.

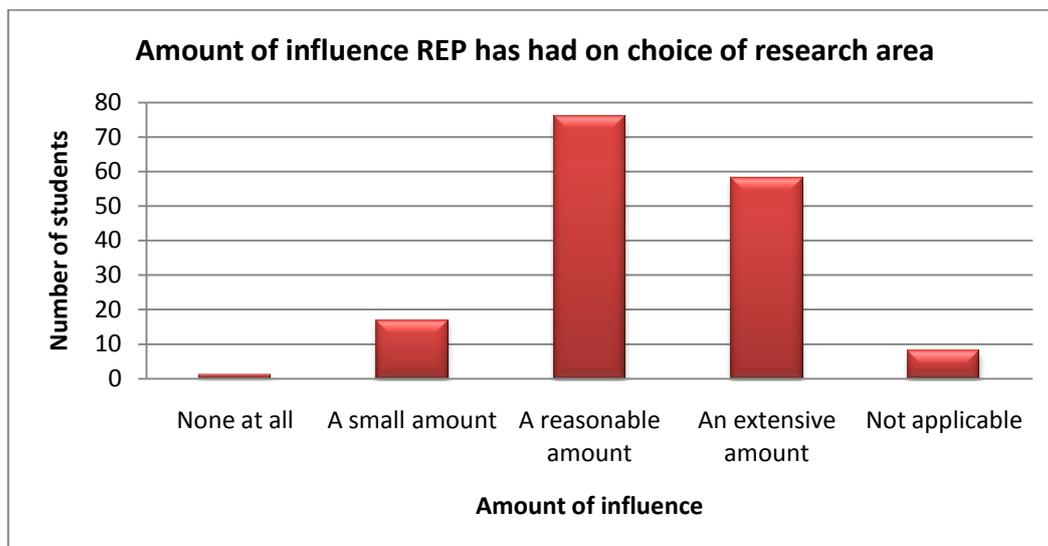
Strategic use of REPs

13. Around half of the REPs were allocated to departments based on their allocation of BBSRC PhD studentships; for these, supervisors were asked to identify which strategic priority area the REP fell into (strategic areas are based on the BBSRC Strategic Plan 2010-2014). There was a spread across these four areas, although the majority of REPs were assigned to the ‘Basic bioscience underpinning health’ area, as shown in the pie chart below:



14. Around 70% of students reported that the likelihood of their pursuing a career in research was higher after the REP than before it. Most others (25%) reported no change in the likelihood; those that were less likely to pursue a career reported that the experience had still been positive but that it had made them realise that research was not for them.

15. Almost all students reported that the REP had had some influence on the choice of research area that they might pursue in the future:



Promoting multidisciplinary

16. Around half of the REPs were carried out either in a different department or different institution from the one at which the student was based for their undergraduate degree. Some of this movement was promoted through the scheme; for example, veterinary departments (who received 6 REPs each) had a requirement for at least two of the placements to be for students going to or coming from another department or institution. However, several other REPs were carried out at different institutions without this requirement; presumably this was to accommodate students who live at home during the summer and who wish to carry out a REP nearby.
17. Several students carried out a REP in a subject significantly different from their degree and the REP appeared to have a significant impact on their choice of research area in the future. For example, one student reported as follows:

“As a physicist, prior to this bursary, I had no interest in biology. My application was mostly motivated by the possibility to develop my physics and computational skills. Also, because I have a choice of doing some biophysics courses as part of my undergraduate degree I thought it would be a good way of gaining insight into the area. The summer programme has allowed me to learn some biology from a different perspective than at school (when I last had a biology course) and it helped me develop an interest in the area. Mathematics, physics and computation are becoming more significant in plant sciences today and I found that I really enjoyed this approach to biology.”

Annex 1: Allocations of BBSRC Research Experience Placements in 2010

Research area	Number of REPs allocated in 2010
Centres of excellence for training	86
Veterinary Sciences	42
Agricultural Sciences	20
Integrative Mammalian Biology	12
Industrial Biotechnologies	15
Multidisciplinary data-intensive biosciences	16
New summer placement schemes	9
Total	200

Annex 2: Selected student quotes from 2010 REP reports

I have really enjoyed the placement, as there has been a good balance between laboratory work and deskwork, which allowed me to consolidate what I learnt in the lab. Working around several other summer students meant that we could talk about our projects, and also find out about what the other labs are working on. Overall, a very worthwhile experience.

Attending lab meetings gave me a better view of what being a scientist in real life is like. This is a really valuable experience to me and makes me even more committed to science research.

While I remain undecided on the precise area of research I would like to pursue, the REP has certainly provided me with a significant amount of insight into the field of microbiology. This area continues to spark my interest, and I am fairly certain that my future endeavors will remain within this area.

I would recommend an REP to everyone planning a career in research definitely worth while, I have experienced many practical things which university just doesn't include. I'm confident it's given me invaluable experience beyond the steep learning curve.

Before I applied ... I hadn't really considered the area of plant science, which is not given as much emphasis in my university course as animal and human genetics. This experience has made me more aware of plant science, and I would now be more likely to consider a career in plant genetics. The rotation PhD programme ... particularly appeals to me.

The overall experience of this summer placement was honestly wonderful and beyond all my expectations.

While I feel the experience I gained here was invaluable and will be helpful to me in my undergraduate degree, it has also demonstrated to me that I do not wish to continue to a career in research.

The experience has made me more confident in carrying out the rest of my degree and has allowed me to make more educated decisions on the modules that I want to choose.

I thoroughly enjoyed my placement and the time spent in the lab, but the experience opened my eyes to the precise day to day realities of working in such an environment and I realize that my personality and personal interests are not well-matched to the requirements of laboratory-based research.

I was interested in a career in research but was not sure whether or not I would be suited to it. I really enjoyed the REP and I believe that it has shown me a good idea of what a career in research would be like, and I believe that I would enjoy it; therefore, I now plan to apply for a PhD.

I am incredibly glad that I undertook my REP in a different department to that in which I am undertaking my undergraduate degree, as I feel as a result I have had the opportunity to learn an incredibly broad spectrum of new skills that I perhaps wouldn't have had chance to in the same department. I also realise now how crucial collaboration between different departments and with other researchers is for development of ideas and projects.