ABSTRACT
Sharing my experience of returning to the industry after my Industrial Placement year and completing the final year of my BSc, the benefits of returning to the same company and therapeutic area. What had my placement year within the programming department at Amgen prepared me for? Additional training sessions I have benefitted from to increase my industry knowledge and an overview of the new challenges faced in my role during my year since returning.

INTRODUCTION
From July 2011 to June 2012 I worked as a Biostatistical Programming Placement Student at Amgen in Cambridge. The year presented an opportunity to develop further the theoretical knowledge I had gained in the first two years of my degree and see its practical application in industry.

PLACEMENT YEAR EXPERIENCE
Throughout my placement year I worked primarily with Programmers and Statisticians on a mixture of early and late phase studies across two different therapeutic areas. Hands-on involvement in the programming study team allowed me to contribute directly to study deliverables, gain a realistic representation of day-to-day work as a Programmer with real responsibility and thus evaluate a potential career within the pharmaceutical industry.

A three month induction plan focussed on integration into the programming team, learning about the industry and developing the technical skills required in the role, through training sessions with colleagues and both internal and external courses:

- Introduction to the industry, the stages of clinical development, types of trial design & statistical concepts
- Learning and understanding the need for company and departmental processes through training manuals. Understanding the importance of standards.
- Programming & technical development
  - External SAS® fundamentals course
  - Working towards SAS certification: Base Programming for SAS 9
  - In-house technical training on various SAS procedures
  - Learning from interaction with experienced programmers
  - Lots of SAS programming
- Immediate integration into the study team
- Determining objectives for the year

Type of programming activities involved in:

- Real study work for ongoing and reporting studies, experience of database locks & deliveries
- Creating & maintaining both source & validation programs across 3 studies
  - Programming ADaM datasets
  - Source & validation tables, figures & listings
  - Creating tables and plots on blinded data for data review committees
  - Exploratory analysis creating patient profile plots

Acquisition of soft skills:

- Experience of a professional office environment
- Effective communication in meetings, conference calls & emails
• Organization, prioritization, time management
• Understanding associated risks of tasks & importance of attention to detail
• Working in a team & handling time zones effectively
• Public speaking, opportunities to present across departments
• Creating an individual development plan and evaluating career direction

RETURNING AND ONE YEAR ON

In August 2013, shortly after completing my BSc, I returned to Amgen as a permanent employee in the Programming department but based at the Uxbridge site. I began working in the same team and therapeutic area as before but on different studies. My experience as a student and the skills I had gained allowed me to get ‘stuck in’ to study work quickly being already familiar with many of the processes and also the product. By jumping straight into programming activities it did not take long to integrate back into the team.

Training I have benefitted from:

• PSI ITIT course to gain a better overview of the industry from early development stages on
  o 6 X 2-day sessions on Research, Toxicology, Data Management & Role of the CRO, Clinical Trials, Reimbursement, Marketing
  o Opportunity to meet people from other companies with similar level of experience
• Programming development
  o In house training, conferences and technical departmental meetings, learning techniques to write increasingly robust code
  o External online SAS macro training course
• Training and manager’s involvement in writing a personal development plan and annual goals to align business requirements and personal career aspirations
• Lots of on the job training, learning through experience and close interaction with my manager

Type of activities involved in:

• Programming work for ongoing and reporting studies
• Creating and maintaining source and validation programs across 3 studies
  o Programming and writing specifications for ADaM datasets including primary efficacy ADaM
  o Source & validation tables, more challenging Kaplan-Meier, univariate & multivariate analyses
  o Handling ad hoc requests
• Study start up activities such as eCRF design
• Increased responsibility in the programming study team, assigning work and coordinating snapshot activities
• Increased interaction with other departments, the wider study team & understanding the functional interrelationships of the team. Working with Amgen’s external FSP (Functional Service Provider) partner in India.
• Attending therapeutic area standard TFL (tables, figures & listings) shell committee meetings

COMPARISONS

Similarities:

• Can continue professional development where placement left off
• Asking lots of questions and continued learning
• Many transferable technical programming skills
• Many transferable soft skills
• Same therapeutic area, product and in many cases study team members
• Familiarities with many processes, continue to learn about new & updated processes
• Maintain weekly 1 to 1s with line manager
• Creating individual development plans and annual goals
Differences:

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<thead>
<tr>
<th></th>
<th>Placement Year Experience</th>
<th>Returning &amp; One Year On</th>
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<tbody>
<tr>
<td><strong>Learning</strong></td>
<td>A steep learning curve to obtain a broad overview of the industry.</td>
<td>Base knowledge in place. Continued development but more directional to desired career path.</td>
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<tr>
<td><strong>Programming activities</strong></td>
<td>Programming study deliverables but lower complexity and looser timelines.</td>
<td>Programming study deliverables &amp; ad hoc requests. Tighter timelines &amp; responsibility for more complex &amp; critical outputs. Creating programming specifications.</td>
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<tr>
<td><strong>Daily activities</strong></td>
<td>Programming study deliverables in two therapeutic areas. Training and development activities.</td>
<td>Programming study deliverables in one therapeutic area. Less overall percentage of time spent programming. More lead activities. Coordinating analyses delivers within the programming team. Assigning work &amp; hosting programming weekly meetings. More diverse work. Study start up activities. More cross departmental and external meetings.</td>
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<tr>
<td><strong>Interactions</strong></td>
<td>Based in the Cambridge office. Interacting with primarily stats &amp; programming departments. Manager &amp; programming team located in the same office.</td>
<td>Based in the Uxbridge office. Sole study programmer in Uxbridge. More meetings. Increased interaction with other departments, the global team &amp; off-shore team members.</td>
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<td><strong>Standards &amp; efficiency</strong></td>
<td>Understanding of company and departmental standards through manuals, interaction with manager and lead programmer.</td>
<td>Increased awareness of industry standards and tools to automate processes or increase efficiency.</td>
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<td><strong>Company awareness</strong></td>
<td>Awareness of Amgen’s pipeline, especially of products that I was working on.</td>
<td>Increased awareness of Amgen’s pipeline, share price, internal framework and strategic direction.</td>
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CONCLUSION

In embarking on my placement year I hoped for the opportunity to realistically evaluate a potential career in the pharmaceutical industry, develop technical and soft skills and hopefully increase my employability after graduating as well as to earn a bit of money and believe it or not to have a break from the student lifestyle. I had not anticipated how much in addition I would gain from the year and the transferable skills that I would take into my final year of university and the start of my career.

The success of any industrial placement, I believe is dependent on both the individuals desire to learn and fully integrate into the team and the company having a good structure in place to support the individual's development and offer worthwhile, challenging and diverse work that encourages them to consider a career in the industry.

Requirements from the company:
- Well-structured placements to allow the student to learn a great deal and also contribute to the team
- Introductory period, good plan set out before student starts
- Development plan in place, evidence of achievements
- Manager's direct involvement, support throughout the year & especially in initial months
- Diversity of work & representative of a permanent employment
- Interaction with numerous members of the organisation

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Gains for the company:
- Adds energy to the environment, encourages collaboration
- Benefit from the work produced throughout the year
- Potential that student may return - many managers have had placement experience themselves

I chose to return to Amgen based on my experience there as a student, the rewarding work I had been involved in and the values the company lives by. I had confidence that the focus on my personal development throughout that year and the training investment they had made previously would be representative of their commitment in a permanent role post-graduating. Not only did I gain a year's industry exposure, I could evaluate whether Amgen would be a company I would like to work for more permanently. I was able to begin my permanent role already being familiar with the team, product and many processes which gave me a huge head start. I hoped to continue to face new challenges and have the opportunity to take on lead activities.

The only disadvantage I have found in returning to the same company is not always being able to differentiate company standards, processes and terminology as opposed to industry wide ones especially in returning to work on the same product; however I believe the benefits far outweigh this. In choosing a different site, I had an increased challenge of working as the sole study programmer in my office but I was able to build a career where not perceived as a student.

My professional placement offered me a year’s experience and foot in the door of the industry which I have no doubt would have been much harder without having had that year. The gains for the student I think are obvious; technical and developmental skills, life experience, applying university knowledge in a work environment and being able to ‘try out’ an industry before committing to that path. I gained so much that has set me up for a professional role within programming however the skills obtained I believe would have been transferable to many different career paths.

CONTACT INFORMATION

Robyn Rosser
Amgen Limited
1 Uxbridge Business Park
Sanderson Road
Uxbridge
UB81DH

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