

Graduates - Where have we found skill gaps?

We continue to recruit graduates and find that the skill gaps we see have a recurring theme. Typically, any placement year/ internship in the industry appears invaluable, highlighting just how much can be learnt and developed in a 12 month period.

- ❖ Those coming from a MSc course tend to be better prepared for working life than those coming directly from BSc courses. This is often explained by the large volume of coursework and the typical longer working days which develop soft skills and create a discipline amongst the candidates.
- ❖ There is often a distinct lack of hands on SAS experience. This is often due to two main reasons. Firstly the difficulty in obtaining a private SAS license, means students cannot easily teach themselves SAS (where R is free), also most academics will program in R, meaning there is limited support and knowledge within Universities for SAS. Universities are aware that industry is very successful in training graduates and do not see the need to go beyond current course content. Most Universities will have a SAS license, so students can access the software should they wish to. Secondly, where SAS is used, the focus tends to be on statistical analysis and not the more commonly used cleaning and creation of new variables.
- ❖ Abilities and attitudes to being a statistician can also be difficult to manage. Other than technical statistics, we are keen to develop competence in the increasingly essential skill of project management as well as communication and understanding of the business. “I am a statistician, I can only do statistics” is an attitude which can be difficult to change and is a common challenge for managers.



Emergence from the Emerging Talent Group



Clinical Trials (ICH)	SAS Programming, tools and macros	CDISC standards and submissions
Statistical documents	Randomisations	Data Management
Unblinding	Protocol Deviations	Analysis Sets
Quality	Planning	Resourcing
Risk management	Negotiations	Finances
Communication	Responsibility	Client specifics
And more..		

The emergence matrix is designed to help new starters and their line manager track development and highlight and seek out the right opportunities to become independent team leads. It is not a tick box exercise to emergence. We have to be realistic and be aware that not every opportunity will be possible within ET, therefore it is at managers discretion as to whether to necessitate it prior to emergence.

We would like these to be demonstrated consistently, learning each time - i.e. just because completed on one project does not mean that category is all 'complete' it is continual learning and understanding that each study can be different with its own unique challenges.

We believe both statisticians and programmers should be exposed to all of the opportunities to some extent to help build a solid knowledge base. We need to work closely with our resourcing teams, study leads and line managers to ensure the right opportunities come along.

Statistical Programming in SAS

At IQVIA we believe that programming and programming challenges should not be restricted to just our programmers. We encourage all graduates and those new to the industry to be exposed to programming tasks and to actively seek code review from more senior programmers. We believe this has a number of benefits which prepares each of us for:

- ❖ SAP and shell writing with programming considerations in mind
- ❖ Learning about specific domains and typical data issues
- ❖ Learning how long tasks take when we have to delegate tasks
- ❖ Data checking and cleaning

It can also make our statisticians a more flexible resource should they have some free time.

The right training at the right time and in the right environment?



Creation of the ‘Bios Academy’ means training materials can be stored in single, easily accessible location and that the materials can be reviewed and updated periodically. Training materials are grouped and filed with sound recordings and presentation materials readily available. The main areas include:

- ❖ New Hire Information and Induction
- ❖ CDISC Training (will need to be taught be from scratch in almost all cases)
- ❖ Programming (SPL) and Statistics (BTL) Lead Training
- ❖ Materials form Lunch & Learn sessions (Discussions for Junior Staff only)
 - ❖ SAS programming topics (particularly those not covered by University courses)
 - ❖ Statistical concepts (for programmers as well as statisticians!)
 - ❖ Domain specific sessions and the associated data



Conclusions and Thoughts

We believe the key to learning is for people to learn from experience. Whilst everybody is different, we have tried to take a uniform approach which we can then tailor to the individual. Our Emerging Talent Managers are there to navigate their reports through those first few years and to guide, listen to and support our leads of the future. Its all too easy to bring in a graduate and to load them up with repetitive programming tasks we know they can capably do, but that will never stretch them or help them to learn something new. This can be unfair on the individual and limits our potential to grow as a team.

We also want to offer opportunities to socialise both inside and outside of the working environment and input into the organisation of such events. This can really help with the development of other key soft skills and creating the rounded professional.

We would like to hear your success stories and ideas as we aim to develop the industry leaders of tomorrow.