

The X-Factor – Recruiting the Best

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ABSTRACT

“Is there a guaranteed way to identify and recruit good quality pharmaceutical SAS® programmers?” This question has been raised many times during recruitment discussions, for programmer recruitment at all levels. Ask around any pharmaceutical programming department and the backgrounds are often diverse, creating a real challenge to identifying a reliable path for recruiting competent programmers into the industry. This paper will discuss the key attributes the ideal pharmaceutical SAS programmer involved in the reporting of clinical studies will possess. I will discuss how recruitment may differ from selecting graduates or others with little experience through to securing the services of the most experienced programmers in the industry.

INTRODUCTION

SAS programmers in the pharmaceutical industry may possess a wide range of skills depending on exactly what their role entails in the process of reporting clinical trials. Identifying whether a candidate for a role has the necessary skills to do the job in hand and identifying whether she/he possesses these skills within the short timeframe of the regular recruitment process is a challenge faced by recruiters across the industry.

Assuming you are not in the enviable position of recruiting high calibre candidates and then finding them a suitable role within the company, the starting point to recruiting the best candidate for a role is to be clear on what is required from the position you are recruiting for. Without defining the key attributes the role calls for, it is likely to be a hit and miss process as to whether the candidate you recruit is suited to the role. SAS skills are usually important to the majority of roles but other complementary skills are also essential depending on what responsibilities the candidate will be expected to undertake. There is a range of other attributes to consider – experience, educational qualifications, other technical skills, supportive (soft) skills and company values to name a few. For each role some will be higher priority than others. This paper details what skills to consider when defining the attributes for a role.

Once the role has been clearly defined, applicants for the position may be compared to role and its attributes. Assessing the candidates credentials, both via reviewing the CV thoroughly and during interviews and testing processes (if used), is a lengthy and skilled task. Preparation is essential to holding successful interviews, ensuring the interviewers know what they are looking for and how to assess the candidate for those skills.

KNOWING WHAT YOU WANT

The first step to successful recruitment is to know clearly what role you are recruiting for – sounds obvious but often the details are left vague, merely stating the need for a “SAS Programmer with experience of study reporting” for example. Knowing what duties the programmer will undertake and in what working environment, will help ensure the right type of programmer is recruited to the role. Before recruiting, ask questions about the role you are hiring for, such as will the candidate be expected to lead others (perhaps informally), will the role require input into high-level decisions with a far-reaching impact or merely be given a list of straightforward tasks to complete? Knowing the detail of the role will also ensure that the candidate can be clearly briefed before and during the recruitment process, enabling them to assess whether the role suits their needs too. Don't overlook the fact that the recruitment process works both ways, enabling the potential employee the opportunity to assess the employer equally as much as it allows the employer to assess the potential employee. Therefore it is important that in the haste to fill their vacancy with the most suitable candidate, the recruiter should never overlook the needs of the employee during the recruitment process. This will assist in ensuring both parties know what is expected prior to the start of the employment period and neither side feels misled during the recruitment process.

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It may often be assumed that SAS skills are essential to the role you are looking for (surely they must be?). However, before making that assumption, consider whether remedial skills and an understanding of what SAS can do will suffice, perhaps for a leadership or organisational role within a project team, where little if any hands on SAS programming is required. Also consider whether the business is willing to train the candidate in SAS. SAS is a programming language in which the basics can be learnt in just a few days and experience is gained on an ongoing basis over a number of years with exposure to different applications of the language. Perhaps a candidate with strong skills in other areas and can show an aptitude to learning SAS may be a consideration?

Supporting (or soft) skills should not be overlooked in eagerness to review technical skills. For some positions, especially those in leadership roles or in the development of new initiatives, communication (both written and verbal), negotiation and influencing skills may rank more highly than hands on technical abilities. Also consider the working environment of the candidate – will they be working amongst a team, with supervision and guidance or on tasks alone, resolving issues for themselves? Adaptability and willingness to learn are key considerations for many employees, especially with the introduction by several businesses of in-house data manipulation and reporting applications (such as A&RT at AstraZeneca). These types of applications require the user to pick up new skills that are likely to be based on the SAS knowledge they currently possess but require the user to apply their SAS skills in an alternative manner to what they are accustomed.

Whatever the specifications are for the role, these should be clearly defined prior to initiating the recruitment process. It is important to consider what constitutes the “must-have” skills and what are less significant to achieving the role. These essential and preferred skills should be explicitly stated in any advertisement of the role.

Once the details of the role have been clearly defined, the type of contract should be considered, either temporary or permanent. This should be a decision driven by the tasks the new recruit will be expected to complete and what will best benefit the business. However, often this is based on budgets or who is available in the current market to fill the vacancy. For example, a suitable use of a contractor would be for a task that has a definitive end and requires little initial project specific knowledge to be productive. In comparison, if a task requires a steep learning curve to company processes and procedures, it is a waste to lose that knowledge at the end of a contract when the temporary employee moves on and so in this instance a permanent contract would be more suitable.

The experience of a candidate will be a sizable consideration to recruiting the best candidate for the job. Some roles will require vast experience within the field that is being filled. This can be found – but at a cost to the business. Consideration should be taken as to whether that wealth of experience is actually necessary to achieve the task in hand or is it just a preference? Could the task be completed using a different method of resource? For example, recruiting a less experienced candidate, new graduate or even a university placement student (probably with the need for more guidance from experienced staff). This option would likely be less expensive and may allow the recruitment of two candidates instead of one experienced (and usually more expensive) candidate for a similar overall outlay, in turn potentially providing more resource to the business for the same cost. The aim is to match the most suitably experienced candidate to the role on offer – not necessarily to recruit the most experienced candidate.

ATTRIBUTES OF THE CANDIDATE

EDUCATIONAL BACKGROUND

Most CV's will contain the candidate's educational background as a matter of course. It could be regarded unusual if these details are not included and may arouse suspicions to the reviewer. However, are these details useful for the recruitments of SAS programmers? As with all industries, as a candidate gains more relevant working experience, the priority given to the educational qualifications becomes less significant as the proven working skills take precedence. When recruiting less experienced staff, often educational qualifications are given high priority as the recruiter has less other information to work with. A raft of good school level qualifications and/or a degree indicates the candidate possess the ability to learn but the details of those qualifications usually contains little indication to the specific abilities of the candidate to perform the role of a SAS programmer. In direct contrast, in the recruitment of biostatisticians to the Pharmaceutical Industry, there are specific courses at several UK universities where the degree or higher course is directly relevant to the biostatistical role within the industry. Biostatistical recruitment therefore often targets candidates from these courses, as experience shows possession of these qualifications ensures a quality statistical employee, but leaves less opportunity for candidates from other educational backgrounds. Those involved in the recruitment of SAS programmers do not have this luxury of such clear educational paths to indicate potential quality and so specific formal qualifications become much less of an indicator of ability to perform well as a SAS programmer and therefore hold less importance. Generally the possession of a good degree is seen as a sufficient indicator of educational ability, rather than any specific degree course. One consequence of this is that SAS programmers come from a much more diverse background and bring with them a wealth of different experiences and knowledge.

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PREVIOUS EXPERIENCE

Experience within the industry and especially in reporting clinical trials is generally regarded as a valued quality to look for when recruiting. Candidates with a previous background working at a Pharmaceutical or CRO have specific industry knowledge that cannot be gained elsewhere. The understanding of regulatory requirements, the submission process and more recently CDISC, bodes well for the candidate if many other applicants lack this vital exposure. However, perhaps sometimes the industry could be accused of being too shortsighted, placing too high a priority on this type of experience? It's understandable that relevant experience indicates the candidate will bring with them a certain level of knowledge and are likely to be up to speed within their new role sooner and with less guidance than a candidate without it. However, if SAS skills are key attribute for the successful candidate to possess, it should be considered that SAS is used in a wide range of industries, including finance, marketing and insurance. Candidates from these industries, amongst others can bring with them not only excellent SAS skills but also the application of those SAS skills in an alternative manner not currently used within the Pharmaceutical industry. What these candidates may lack in Pharmaceutical knowledge, they can make up for by bringing alternative experiences and methods of working which are transferable whatever the previous experience. Obviously the skills they lack in pharmaceutical knowledge will need to be filled and so in this respect there is a requirement for the hiring business to invest in training and educating the new recruit. For this reason, recruiting candidates with no previous relevant experience is usually limited to permanent employment roles, where the time and investment will be recouped over the period of employment. For temporary contract employees, it is unlikely that candidates lacking relevant experience will meet the requirements and be able to quickly play an active role in the business in a limited time period of their contract.

In addition to recruiting candidates without industry experience, there is the option to recruit from resource pools within the clinical study reporting process but outside programming. Both biostatisticians and data managers are relatively frequently seen making a successful transition into programming roles. The benefits of these candidates, having knowledge of the pharmaceutical industry and in many cases also good SAS skills, make them excellent candidates for programming roles. Additionally, candidates recruited from within the same company also bring with them further benefits. As they already have knowledge of the processes within the department they have left, they can add value to the programming department with their knowledge of how these processes interlink with the processes of the new department. Bringing this type of knowledge from a different perspective to current employees in the recruiting department can be of great benefit if the new employee has the opportunity and skills to apply this knowledge effectively in their new role. This type of experience is especially beneficial for senior and leadership roles but even at more junior levels, if the knowledge from a previous department can be tapped into, it can be beneficial to the new department.

PERSONAL ATTRIBUTES

A candidate may possess all the relevant previous experience and show excellent technical and supporting skills that match those defined in the job details but still not be the best candidate for the role. If the personality of the candidate clashes with those of the team she/he will have to interact with, the candidate will never realise their full potential in the role. Equally, if the candidate has an opposing philosophy to that held by the recruiting company, she/he is unlikely to be suited to the role. For example, if the company expects ideas to be raised to senior management for approval prior to execution, the role is unlikely to suit a freethinker who is used to implementing his/her own ideas without prior consent. Likewise, a candidate who looks for reassurance around every decision they make is not suited to a role requiring constant decision-making. It may be difficult to identify these personality types in interviews and requires carefully planned, probing questioning to unearth the subtlety in answers that will indicate how a candidate is likely to react in different circumstances. Sometimes a candidate may be aware their own attributes do not match those sort by the recruiter and so they may try to hide these characteristics, giving answers in the interview which they presume the employee want to hear, making the process of identifying the actual attributes of the candidate more challenging.

ASSESSING CANDIDATES

The recruitment process will always include some level of interview. This may begin with a "phone-screen" type procedure where the employer engages in a brief chat to confirm rudimentary information, such as key details on their CV and availability for employment. This also enables both parties to obtain a general initial impression of each other and allows further details of the more in-depth interview process to be explained to the candidate, allowing them to opportunity to ask questions regarding the recruitment process. It is generally relatively informal and will last less than 30 minutes. This type of initial interview is especially useful if the candidate is located some distance from the recruiter or in a different country.

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A face-to-face interview or interviews usually follows, or in some cases is the first contact between the employer and potential employee. Interview processes differ widely between different companies but in general will include the candidate being asked predefined questions pertinent to the role, by an interview panel. The panel is likely to be a mix of employees from the recruiting programming department, often with a range of skills and with varying seniority. A specialist from Human Resources is also usually included on the panel. Each panel member will be looking for different attributes in the candidate. The number of members on the interview panel may vary from one to several employees. The number of interviews, the length and formality of each interview will differ between companies and also the interview style of those on the panel. Preparation prior to taking part in an interview panel is crucial not only to give the candidate a professional image of the company they are applying to, but also to ensure that the time spent interviewing is well used and allows the candidate to provide the best information possible. Interviewing is a skill that requires obtaining defined responses from the candidate. It is very easy to leave an interview (as part of the interview panel) with the impression that the candidate *would* be able to successfully carry out the role being recruited for, but with few or incomplete examples this cannot be justified. A candidate with excellent interviewing skills may be able to put this information across with little prompting and therefore be perceived as a great candidate (but perhaps she/he has just attended more interviews so is more experienced at interviewing?). In comparison, a candidate may possess all the required skills to do the role but be less experienced or capable at interviews. This candidate may require more prompting from the panel to be able to supply suitable examples they possess but cannot readily provide. A well-prepared interview panel will know what key information they expect in the answers they receive for each question put to the candidate. A skilled interviewer will be able to retrieve all the information the candidate possesses about the question by asking the question in different ways, without directly leading the candidate to the answer. Interview questions should consist of a set of common questions, relevant to the role, asked to all candidates and additional questions specific to the background and experience of the individual candidate. In order to prepare the individual questions, a thorough review of the candidate's CV is required. These questions give the candidate the opportunity to explain in more detail complex information provided on the CV, which may not be clear to the interviewer, or respond to questions regarding any discrepancies the interviewer has identified. Without a thorough review of the CV, key information may be overlooked.

In addition to interviews, many companies assess the technical skills of candidates via specific SAS tests or aptitude tests to identify the candidate's logical ability. Aptitude tests can be useful indicators of a candidate's ability regardless of whether they have any prior SAS knowledge. This makes them excellent tools for assessing university placement students or new graduates and those with little relevant working background to back up their SAS knowledge. SAS tests are useful to gauge a candidate's previous exposure to SAS. However, these tests often poorly mimic the real experience the programmer will have if they are successful in obtaining the role. The examples are frequently rather artificial and often the tests are completed on paper, an alien way of writing SAS code. Therefore caution should be applied when interpreting the results. For example, a minor syntax error on paper is likely to be easily identified via the production of a suitable SAS error to the log. In addition, when carrying out the role, the candidate will have the ability to refer to a range of SAS help options, which are usually not allowed during the test. SAS tests can be a useful tool to assist in assessing candidates but care must be applied in interpreting the results.

CONCLUSION

It would be difficult to say there is a guaranteed way to identify good quality programmers, however, there are many ways to increase your opportunity of selecting the right candidate for your role. Recruiting programmers successfully to the pharmaceutical industry can appear to be a difficult process. However, the effort applied to ensure the correct candidate fills the role can make the difference between success and failure to a project and therefore makes the effort invested worthwhile. Recruitment itself is also a costly process and so must be achieve the right result, first time. The key to success is preparation at each stage – identifying up front what skills the role requires and later, thoroughly planning interviews ahead of time and tailoring some specific questions to each candidate individually, based on their background. To become a skilled interviewer requires training and practice and is a skill that is often overlooked, however, if it assists in the recruitment of the right candidate, the effort put in is worthwhile. When the correct candidate is recruited to the role, both the employer and new employee view the process as coming to a successful conclusion. The time and effort put in should hopefully ensure that in the long term both the employer and new employee remain happy with the contract, therefore adding the additional benefit to the business of negating the need to go through the whole process again in the near future.

DISCLAIMER

Please note that the views expressed in this paper are based on my own observations of recruitment within the pharmaceutical industry and these are not necessarily those of AstraZeneca.

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