

From Programmer to Manager – Facilitating the Transition

Russell Gibson, inVentiv Health Clinical, Manchester, UK

ABSTRACT

Today's programmer typically has a mathematical and statistical background; they are well versed in procedures, algorithms and specifications. However when asked to take on management responsibilities, knowledge of SAS® may be less helpful. It suddenly becomes apparent that a vast array of soft skills is required in order to develop another person, to guide their professional development and to lead them to success. This paper suggests ideas and tools to help smooth the transition from programmer to manager. Its focus will be management of people, rather than the already well documented subject of project management. The author discusses personal experiences of accepting people management responsibilities for the first time and compares these with management and leadership theories found in established literature.

INTRODUCTION

Making the transition from a SAS programming position into management is not a simple process. Programmers typically work in an environment of logical absolutes where code must be written in a certain way and validation comparisons must match exactly. Management however is the polar opposite and is the epitome of an inexact science. One must instead work in an environment of ambiguity, dealing with the variety of human issues that cannot be so simply solved. These issues demand a new skill set that the programmer will have to learn in order to succeed as a manager. The programmer may have the skills to write complicated macros, but can they lead an inexperienced colleague to a promotion? A mathematical, statistical and logic orientated background may not be the best fit for management where an understanding of leadership, motivation and communication may be more beneficial.

The vast array of management literature is baffling and one can read entire books and not implement a single idea into their daily routine. Employer provided courses and training modules can be a helpful resource as these are often industry specific; however they are rarely specific to the SAS programming role. The programmer may already have the required skills, learned from years of industry experience and interaction with their own managers. However, identifying and putting these learned skills into practice may be difficult. The programmer must combine their existing knowledge with their own research, moulding and forming a natural management style that is their own.

This paper initially discusses the required skills of the new programmer-manager and areas they could explore and improve. More specific actions that can be implemented during the transition will then be considered. The paper attempts to encourage further personal research on such a vast topic and does not assume to be a comprehensive guide.

WHO THIS PAPER IS FOR

The target audience for this paper is any SAS programmer who is interested in or intends to take on managerial responsibilities. This is not a decision to be taken lightly. It should be a considered career decision that should be researched and discussed with your own line manager. However, this freedom of choice may not always be available and one may find themselves transitioning to management simply due to the unavailability of others, through illness or resourcing issues. Additionally, an expectation may exist that management responsibilities are a requirement for further promotion, so again this could impact the 'choice' of moving into management. This paper may also be of benefit to existing managers who are considering asking a subordinate to take on a management role.

LINE OR PROJECT

Within this paper my focus will primarily lie with 'Line management' or the individual management and development of SAS programmers. Project and team management is already well documented so these facets of management will not be discussed. In the context of this paper, the 'Line management' of SAS programmers will now be referred to simply as 'management' and the colleague who is to be managed will be referred to as the 'report'.

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One should, of course take into serious consideration the requirements of the project and the organisation as a whole when making developmental decisions; they should not be separate entities. Consider for example, if your suggested trainings will benefit the project in addition to the report, how are the two linked? Will giving your report the responsibility to train junior colleagues detrimentally impact the project they are primarily assigned to? Perhaps it may bring benefit. If you are not your report's project manager, communication with the project manager and careful communication with your report is required in order to align developmental needs with those of the project.

DEFINITION OF MANAGEMENT

From personal experience my rather condensed definition of management would be:

"The leadership of another programmer that ensures the needs of the organization are met and that the individual has the opportunities and the means to achieve their professional goals"

My definition however is as vague as management itself and provides little detail about what is exactly required of you when transitioning to the role. The word leadership can be replaced by other words such as coaching, influencing and empowering; all of which can improve the definition. However on a daily basis, these words are lost amongst the myriad of small tasks that cumulatively form their meaning.

SKILLS

The following skills are not mutually exclusive. Skills of communication and motivation both amalgamate into the skill of leadership though are important enough to be considered separately in this section.

LEADERSHIP

A very human and psychologically complicated skill, it is easy to become lost in the definition of Leadership and how this translates into the conduct of daily tasks.

"Leadership is not magnetic personality, that can just as well be a glib tongue. It is not 'making friends and influencing people', that is flattery. Leadership is lifting a person's vision to higher sights, the raising of a person's performance to a higher standard, the building of a personality beyond its normal limitations." (Drucker, 1993)

Management theorists attempt to quantify and categorise leadership in order to identify the personal traits that make good leaders. Douglas McGregor (1960) identifies two models of organizational situations and a leadership style for each. McGregor's Theory X states that humans don't like work or responsibility and employees crave direction, thus calling for a hard and authoritative management style. Theory Y however states that employees are concerned with job satisfaction and actively seek responsibility in their daily work. This would call instead for a softer management style, being more participative rather than instructive. One could identify SAS programming as a skilled profession, where employees are educated and generally motivated, applying McGregor's logic in this case would mean Theory Y would be most applicable. In my personal experience however, there have been occasions where a more Theory X approach was more appropriate, especially when coaching a skill that is inherently repulsive such as presentation skills. Therefore, segregating leadership into two mutually exclusive styles seems rather simplistic.

Robert House (1971) however classifies leadership using four categories, creating a theory that explicitly associates leadership style with motivation. House defines Directional, Supportive, Participative and Achievement-orientated leadership styles and like McGregor, the style of leadership will depend on the organizational situation. Directional style entails the leader giving explicit instructions to the reports, much like McGregor's Theory X style. A Supportive style according to House, entails showing concern and friendship for your reports whereas a Participative style involves more consultation with the report and the consideration of their opinions. Finally an Achievement-orientated style requires the setting of challenging goals and an expectation that the report will perform well in order to achieve these. House's theory provides flexibility and each style is applicable in some way in a SAS programming context, again depending upon the situation.

Daniel Goleman (2002) further expands his definition of leadership into six different styles: Commanding, Pacesetter, Democratic, Affiliative, Coaching and Visionary. Commanding begins as the most autocratic style, with each subsequent leadership style specifically suited to a different organizational situation. These styles are helpful when trying to quantify what Leadership involves on a day to day basis and provides a framework for different approaches.

Example 1: Your report is stressed about upcoming database lock timelines and is not getting clear answers from project statisticians. Goleman suggests an 'Affiliative' leadership style in this situation, promoting empathy and encouraging connections with other team members in order to motivate. The manager could get in touch with other colleagues who have been in their situation and ask them to provide advice and assistance.

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Example 2: Your report is not completing programs on time and their outputs are full of simple mistakes. Their interactions with you and other colleagues are problematic and often cause dissonance. In difficult situations like this, Goleman suggests a 'Commanding' leadership style which involves studious monitoring, tight control and clear instructions in order to resolve the ongoing issues. The manager should communicate with the report in an authoritative way, explaining clearly what is going wrong and what is expected of them to resolve the situation.

The consensus gleaned from my personal experience and research is that the key to being a good leader is having the ability to recognize which style to use in which situation. The transitioning programming manager can identify with each and every leadership style, however if they cannot translate this learning effectively into the workplace then one can expect problems. Some situations call for close monitoring of your report in order to ensure their trainings are done on time or to ensure the goals you agreed on are being pursued. Other situations instead call for the delegation of decision making and empowering them to take control of their own development. I believe that this zen-like 'situational awareness' is key to effective leadership. Unfortunately I do not believe that this skill can ever be completely learned. Every report is different and every situation is different, leading to millions of potential combinations. Mistakes will be made and the wrong leadership approach will be used for the wrong occasions through poor choices, stress and lack of time. It is important to learn from your mistakes and develop yourself as well as your report in these situations.

COMMUNICATION

The development of a SAS programmer is a collaborative process and should involve much discussion. The transitioning manager should take much care with their communication, alternating their approach depending on the current situation. Key considerations include:

- Transmission of specific and unambiguous messages
- Attributing value and 'emphasis' to messages and instructions
- Use of active listening and open two-way communication

Friedman (2011) champions the use of specificity in communications and vehemently admonishes the vague. As SAS programming is such a complicated and particular discipline, this approach may work well, ensuring your report receives the correct message. In turn this can improve motivation as the report has a clear and understood path towards their goals. However, one should avoid being too specific, overloading with information is akin to micromanagement that can severely affect your report's motivation.

"Lay out the issue. Ask for their suggested solutions. Add your own ideas. Then let the programmer make the decision. A good manager can get things done with out telling people what to do." (Haworth et. al, 2005)

In order to ensure the message is heard and processed by the listener, the communicator must attribute some value to the message being heard. Grognet and Van Duzer (2003) state that listeners must have a purpose for listening. This emphasises the effective use of explanation. For example, taking the time to explain why a certain SAS training module will help your report should instil value into your instruction to take the training.

"Developing excellent communication skills is absolutely essential to effective leadership. The leader must be able to share knowledge and ideas to transmit a sense of urgency and enthusiasm to others. If a leader can't get a message across clearly and motivate others to act on it, then having a message doesn't even matter." (Gilbert Amelio, President and CEO of National Semiconductor Corp)

From my experience, communication should be the foundation upon which you build your developing knowledge of leadership, motivation and other management skills. Again 'situational-awareness' is required to cater how you communicate to the needs of the moment. I found that the teachings of Friedman are especially useful in the SAS programming environment: being specific, providing a clear task and ensuring that the timeline is understood leads to a 'common-ground' where the report knows what is required of them and the manager is confident their message is well received.

MOTIVATION

Probably the most debated subject of all is motivation and how to motivate your report to excel in their work. From my experience as a new manager, it is important to find out exactly what motivates your report. I believe this should be done in three ways: asking them, observing them and suggesting to them.

- Asking them: By asking them directly, you should get a rather comprehensive answer. Responses may include prospect of promotion, job enlargement and more responsibility. However it is always difficult to know if their responses are true or if they simply fit the corporate framework of what a 'good-employee' should aspire to.
- Observe them: This may provide a more honest answer to what motivates your report. By observing them and listening to them closely, it is possible to find motivating factors that would not normally arise if you asked them. For example, your

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report may be motivated by working standard hours per week and may get severely de-motivated when the project requires overtime. Motivating factors such as this may not be readily revealed if you ask them directly.

- Suggest them: Perhaps your report doesn't really know what motivates them. A safe and reliable position working for a good company may be enough to sustain an acceptable level of effort from them. However if you suggest ideas to them that they may not even be aware of, you may find that these motivate them considerably. For example, you could suggest them to write a paper for a conference or get involved in the recruitment and interviewing process of other programmers.

House's Path-Goal theory states that leaders can impact the performance of their reports by clarifying rewards for achieving goals, defining the path to these goals and clearing the path of obstacles to performance. This could be put into practice after you have researched what motivates your report; if you clear the path towards their motivating factors you enable their achievement potential.

Smoak (2009) states that motivation is key to empowering SAS programmers; I believe the flow of influence travels in the opposite direction; one should use empowerment to motivate their reports. Giving your report more responsibility, can increase their sense of worth within the organization and make them feel like their actions have a direct impact on the performance of the department or other employees. An example of this would be to make your report a subject matter expert that other colleagues can refer to for help. This provides an elevated position of knowledge that can motivate employees.

Care should be taken to ensure that your report has enough developmental projects ongoing to ensure motivation. I would recommend at least one long term project such as an ongoing modular training program and also one short term project such as writing a paper for a conference. Having multiple tasks ensures that during the downtime of one project, the report can be busy working on the other. This potentially avoids boredom and time wasting.

"If the employee only has one task, and is not inclined to finish it, he/she will waste many hours not finishing that task." (Boisvert, 2008)

It also ensures that the report understands that their development is continuously ongoing and investment in their professional development is long term, whilst also having short term achievable goals.

Herzberg (2008) realizes his theory of Hygiene and Motivating factors, claiming that certain organizational features can typically motivate and demotivate employees. In Herzberg's research, factors that can lead to satisfaction (Motivators) were found to include achievement, recognition, the work itself, responsibility and advancement amongst others. Factors that can lead to dissatisfaction (Hygiene factors) were found to include company policy and administration, supervision, the relationship with the supervisor and work conditions to name a few. From this we can apply these findings to the SAS programmer. In my experience, the report responds well when an achievement is made and congratulations are exchanged, a presentation may go well or a distinct improvement in communication may have been realized. I have also noticed that close supervision is not very well received as the report may enjoy using their own knowledge to solve problems rather than my own micro-management. All these features must be taken into consideration to motivate your report.

ACTIONS

The following actions will be listed in a general order of conduct, essentially one should follow the other, however this is not mandatory. They are not listed in order of importance.

SLOW DOWN AND RESEARCH

You may have expressed interest in management, or it was suggested to you by your superior or there is simply no one else available to do it; how you enter management impacts how you will progress. Time is a crucial factor at the beginning of the transition. Having plenty of time will mean that you can effectively prepare; you can research the role and learn more about who you will be managing. However if you have little time, you will be rushed and you will have to make important decisions on limited information. This is compounded if you have just joined a new company as a manager. In this case you are expected to learn about the new environment in parallel to your new role. This transition is very important as getting it wrong can impact a future working relationship. You should consider researching the following:

- Who are you going to manage?
- What are their particular programming skills and knowledge?
- What programs and projects are they currently working on?
- Who previously managed them? Can you see previous performance reviews?
- Is there any other important information that you should know?

Talk to people, get as much information as possible and ideally discuss your transition with the previous manager. Ask if there were any previous problems that you should be aware of. This background knowledge, gained before you have had your first meeting with your new report will not only bring you confidence but will also instill confidence in your report that

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you are well prepared for this role. Care must also be taken however to not preconceive an image of your report before you actually meet and work with them. Being open minded and flexible with your research will ensure that you don't begin your relationship with your new report in the mindset of their previous manager.

NAIL THE FIRST MEETING

In my opinion, this is the most important action to consider. The prospective manager must get this right and must prepare carefully in order to do so. Take all the information you have learned about your report and prepare a list of items and questions that you want to discuss, if you are not acquainted, you should begin with an introduction.

- Introduce yourself and talk about your career history. You should talk about your own SAS programming work to ensure that your report understands your level of experience. Don't be afraid to talk about your successes as this will help to instill confidence in your report regarding your own abilities.
- Ask them to introduce themselves. This is important even if you already know the person as it will begin the system of communication that will continue from this point throughout your relationship.
- Ask questions and actively listen to the answers. Ensure you understand their responses and take notes as required.
 - What projects and programming tasks are you currently working on?
 - What programming tasks would you like to work on?
 - How would you like to see your career develop?
 - What do you want from your career?
 - What are your career orientated interests?
 - What do you need from me to achieve your career goals?

From these questions you should be able to infer what type of programmer they are and how to tailor your leadership and communication style.

- Care and time should be taken with the above discussions, ask further questions about their responses so you can get to the essence of what they are trying to say. Listen to nuances and vocal hints, look at their body language and try to interpret their genuine meaning. As this is your first meeting, your report will also want it to go as well as possible and they will want to make a good first impression just as much as you do. Consequently, try to figure out from their responses what is genuine and what is just being said to impress. The use of open questions demanding expansive answers can help with this. Following up their responses with a well placed 'Why?' question will help to show if they have really considered their responses or if they are more rehearsed 'off the shelf' answers.
- From their answers you should form a rudimentary plan; you now know where they want to be, so now you must decide how to get there. Your company is likely to have training or development plans that are used as part of performance review; ideally these plans can be used to record and organize the initial plan you drafted at your first meeting. Ensure that you seek your report's opinion on how they think they could achieve their goals. Give them as much space as possible to decide how they want to progress.
- Finally you should end the meeting by stating how your relationship will work from now on. Explain how open you are to their communications, explain how you will work to resolve their problems and explain how you will make it your responsibility to ensure that they are happy in their job. You should also be clear that this is a two way relationship and that you expect a fair and equal contribution from their side in order to achieve their goals.

ESTABLISH A SYSTEM OF COMMUNICATION AND STICK TO IT

This step is dependant upon your own work commitments and that of your report. A weekly meeting lasting for half an hour at a minimum should be set up, ideally at the same time and day during the week to establish a routine. You should spend time discussing their project, how is the work progressing? Do they have the skills needed to perform well on the project? Are there any problems that you could help with? Are the needs of the project and the organization being met?

After the project has been discussed you should move onto developmental subjects. You should regularly check if your report is taking steps to achieve the milestones that were agreed in their plan, are they taking the correct training courses? Are they writing enough macros? Have they been getting opportunities to use certain procedures in their programs? These meetings should be used to clearly define what needs to happen and how to make it happen.

CELEBRATE THE SHORT TERM GAINS

It is important to start your new relationship with a success. By celebrating a short term success, you improve the confidence of your report and solidify your new position as manager to your peers and your own manager. Try to focus your initial efforts on a short term gain right from the initial meeting with your report. Seek out a particular project, procedure or a presentation that would contribute to your report's goals whilst also being achievable in a relatively short space of time. If your report is successful then ensure you communicate this success appropriately across your programming department or within their project team. Ensure that the celebration is performed in context with the milestone achieved and try not to over-exaggerate. Exhibiting positive progress at the start of your new position will not only improve your report's confidence in you, but also your own confidence in yourself.

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PUSH AND EMPOWER

Be enthusiastic about your report's development and their project work. Always provide suggestions for them to try new things and work on new projects, let them decide if they want to get involved. Empower them to take control of their own development while you push them forward with support and encouragement. Variety and job enlargement can be an important motivator and your active 'pushing' shows that you are dedicated to their development. If your report is uninterested and de-motivated, try a different approach, suggest a new avenue for development or consider if they could contribute to the project in another way? Do not limit yourself to your own ideas; seek the opinions of your report and even other managers to find new developmental opportunities that may be completely new to you but inspiring to your report. Always keep the needs of the project within your developmental considerations and work closely with the project manager to identify where knowledge gaps are occurring. For example you could suggest extra training for SAS Graph procedures or coaching from another project team member to develop analysis dataset knowledge. It may be difficult to sustain your enthusiasm for a long period of time but your report will look to you for inspiration, so it is important to maintain your optimism about your report's development.

BE TRANSPARENT

This is a simple concept but one that can be easily missed in the everyday menagerie of short, ad-hoc conversations and rushed catch-up meetings. To be transparent in your decisions and suggestions is to explain your reasoning behind them. This honesty can help build your relationship with your report and avoid them feeling like they are simply being ordered around. Knowing why they should do something will justify the need and provide motivation for the act. Being open with your ideas stimulates collaboration and proliferates a trusting relationship of genuine and mutual professional courtesy (within the boundaries of organizational confidentiality). To be completely transparent in all facets of management, one must also be openly honest during more sensitive situations. Providing positive feedback is relatively simple as most people appreciate and feel motivated upon receiving. However providing more constructive feedback is more difficult and must be handled more carefully. Maintaining a transparent approach in these cases ensures consistency between good and bad situations, which ensures that you are impartial, honest and your management style is reliable.

CONCLUSION

The transition from programmer to manager can be a difficult process as one balances programming responsibilities with management. It may be a long and carefully considered process or it may however be a short, rushed and hectic process. To enable a successful transition one should be aware of the situation. Take a step back and ask yourself, how would I react to my conduct if I were the report? Would I respond positively or negatively? Putting yourself in the position of the report can reveal a lot about your own management style and could smooth the transition into a challenging, interesting and rewarding career path.

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CONTACT INFORMATION

Your comments and questions are valued and encouraged. Contact the author at:

Russ Gibson

inVentiv Health Clinical

Russell.gibson@inventivhealthclinical.com

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