

Career paths for chemists – is management still the way up?

Erin Wood predicts that future chemists will need a strong combination of management and specialist skills.

A recent work by the Boston Consulting Group, *The Manager of the 21st Century: 2020 Vision*,¹ identifies the potential for the future leaders of organisations to be specialist managers, not just the generalists of recent decades. Is this the first glimpse of a new era of recognition for scientists?

This optimistic outlook is based upon assessment of the nature of challenges and opportunities that lie ahead, the importance of scientists to meet them, and the high levels of expertise that will be needed by the organisations and communities of the future. This concurs with the information that we regularly read in the media about the many new challenges in industry where the contribution of scientists will be necessary to find the right solution. Just consider the challenges and opportunities for chemists in the agricultural, food, forestry, pharmaceutical, mining and other sectors.

For a chemist the question that naturally arises is whether future recognition will be as a specialist or whether management is still the way up. This article reinforces the relevance of continuing professional development in both the management and specialist spheres, where the greatest strength and future benefit is derived from the combination of skills.

Chemists and the skills shortage

Demand for graduate chemists is strong. Research by the Graduate

Careers Council published in 2006 indicates that 83.7% of chemistry graduates available for work were in full-time employment.² Future demand is also likely to remain strong as the employment opportunities for chemists are not tied to the well being of a single industry sector in the way that architects are tied to the construction sector.

It is worth remembering that demand for chemists has not always been so strong and that some of the industries in which chemists work can be cyclic. Dr Anthea Airey, senior scientist at Airey Taylor Consulting, who has degrees in science and business, remembers moving industries to survive recessions in mining and forestry. This phenomenon is also evident in other technology-based professions. When raw chemical manufacturing was increasingly being sent offshore, chemical engineer John Donaldson explored new methods to develop his skills set to add a more business-focused approach.

Skills positioning

Airey, Donaldson and many of their colleagues have in past decades undertaken MBAs as a method of gaining management skills that could provide more senior roles, better recognition and better careers. Donaldson wanted to 'add to his credentials' so that he may be placed in a more stable management role. Airey, who was recently presented with the APESMA Latrobe MBA, asserts that the program played a fundamental role in sharpening her business acumen and gave her man-

agement credence in the scientific community.

The MBA launch by the Association of Professional Engineers, Scientists and Managers Australia (APESMA) has played a significant historical role in meeting these needs and in defining the importance of management education training for engineers, scientists and other technical professionals in Australia over the last 18 years. It emerged at a time when there was a great demand for specific management skills training by technology professionals. The APESMA MBA, which is offered by distance education, boasts an alumni of over 8000 national and international graduates. APESMA CEO John Vines said, 'Our management education program has changed the culture of the engineering and science fields from being very technically orientated professions to professions that now recognise the importance of combining technical and business skills as a pathway to both management roles and also providing a broader skill base for technical decision making in organisations.'

Technical/managerial roles

Many roles already combine technical and managerial skills. Some managers, such as lab managers, supervise other scientists and such roles are well known in the field. Other roles may be further afield, but still relevant to chemists and may be worth considering if you wish to broaden your skills and experience.

Operation management roles in the mining, mineral processing, oil

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refining or manufacturing industries are one example. They can draw upon a chemist's technical knowledge and problem-solving abilities, as well as the more traditional managerial skills such as communication and people management, risk management, financial management, project management and so on. The latter skills are significantly aided by management education, such as via an MBA.

Recognition

According to the 2007 APESMA/FASTS Professional Scientist Remuneration Survey Report,³ levels of responsibility continue to be a strong indicator of salaries paid. Management salaries paid continue to outflank other job functions across the sciences except for in mining (exploration). Overall the combination of the specialist and managerial/business skills continues to be the winning combination.

The variation in salary movements by industry sector reflects the levels of demand, where again mining is winning through, with median scientist remuneration increasing by 6.6% p.a. The next highest performing industries were consulting and technical services at 5.5% and pharmaceutical/cosmetic at 5.4%. Median levels of pay received by chemists in 2007 increased by 4.3%.

With the level of demand in mining leading to full employment of graduates in fields such as mining engineering, it would take substantial additional demand in other fields of science, such as chemistry, to start to produce technical salaries that outweigh managerial salaries in these fields in the short term.

Career success – skills, but also your own orientation

Managerial roles are still highly recognised and are likely to remain so in the future, so the combination of technical and management skills will enhance careers. Future management responsibilities such as those for risk, finances and people are unlikely to become less onerous and will continue to affect us in all our activities. In addition, it is usually the soft skills such as the communication skills that make the difference in recruitment, where technical skills are to an equal minimum standard. So it is essential to continue to invest in non-technical skill development, even if you are not going to be a manager.

Career success and satisfaction are enhanced by pursuing strengths and interests in the right type of work environment. Whilst strengthening managerial skills is useful, some are more likely to excel and be satisfied in more strongly technical roles.

Some scientists may question the extent to which they are suited to take on managerial roles or the areas of skills that they need to further develop. Tools that aid personal and career orientation, skills reviews and career planning are available to assist scientists. Advice and assistance for these tools is available through APESMA's specialist career coaches. It is essential to do what you enjoy to have a meaningful career.

A final observation from an external vantage point – don't lose your science; we need your ideas and ingenuity to meet future challenges. But make sure that your career in science also works for you.

References

- 1 Nicholson J., Nairn A. *The Manager of the 21st Century: 2020 Vision, a report by the Boston Consulting Group for Innovation and Business Skills Australia 2006*. Sydney, Australia.
- 2 Graduate Careers Australia. GradStats Number 11, December 2006.
- 3 Association of Professional Engineers, Scientists and Managers Australia. *APESMA/FASTS Professional Scientist Remuneration Survey Report, 2007*. Melbourne, Australia.

The APESMA MBA is delivered by Chifley Business School and further information is available at www.chifley.edu.au. Additional information on APESMA is available at www.apesma.asn.au



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