

The Career Development in the Minerals Industry Event 2015

The SAIMM Young Professionals' Council (SAIMM-YPC)

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Background

In August 2013 the Southern African Institute of Mining and Metallurgy (SAIMM) hosted the Career Development in the Minerals Industry Event, as co-ordinated and organized by the former Career Guidance and Education Committee for final year mining and metallurgy university students. The main objective of this event was on *'mapping a career path, advising students what to expect in their first five years of employment, and to give them a sense of comfort that they will receive the necessary training, including human resource aspects in relation to the career they have chosen'*.

Among the speakers of this event was Theunis Otto, who is the Head of Mining Processes at Kumba Iron Ore Limited, and Roger Dixon, Chairman/ Corporate Mining Consultant at SRK Consulting. Among the topics covered at this event were career paths, mentoring and professional registrations. The event was held at the Sci-Bono Discovery Centre in Newtown, Johannesburg. This event was not held in 2014.

The SAIMM Young Professionals Council (SAIMM YPC), having taken over the duties formerly assigned to the Career Guidance and Education Committee, has tasked itself with convening the event in 2015, as it considers it valuable for final year university students.

Purpose

The Career Development Event is aimed at equipping final year university students in the mining and metallurgical disciplines with the relevant information as they begin their professional careers. It is recognized that at times students enter the minerals industry, as graduates, not being fully informed of the realities and challenges that they will encounter, leading to frustration in the early years of their careers

This year's event aims to take a greater Southern African perspective compared to the 2013 event, with invitations extended to speakers across the Southern African Development Community (SADC) to make presentations to the students. It has been identified that the South African mining industry seems to have reached a plateau in terms of the intake of new graduates, with a significant number of recent graduates finding themselves without work. For this reason the SAIMM YPC has sought to invite speakers from across the SADC region, to make students attending the event aware of the opportunities across the region.

Outcomes

This event aims to furnish students with the knowledge, experience and advice of various industry players from different areas of the minerals industry.

It is envisaged that student will take away the following information from this event:

- an understanding of the various career paths a mining and metallurgy qualification affords them
- the necessary training and registrations they will require at their early career stages and
- the personal development plans and initiatives graduates can undertake to differentiate themselves in the market place.

Message from the Chairman

On behalf of the SAIMM Young Professionals Council (SAIMM-YPC), I thank you for your attendance and participation in this Career Development in the Minerals Industry event. We hope that the interaction with our team of academics, consultants, and business leaders will stretch your mind and provide you with new insights and new ideas to take forward into your career.

This event is an opportunity for you to enhance your knowledge and awareness of issues and opportunities facing the minerals industry. It is an opportunity to gain greater awareness of the skills and experience required to lead the industry in the years ahead. Importantly, it is an opportunity to take a moment to look inwardly and assess your personal attributes, preferences, skill set and values and to provide clarity on the types of organisations you would fit in to or jobs you would like to pursue. Lastly, this is an opportunity to build networks with contemporaries from other tertiary institutions.

We are pleased to present you with this information handbook. It contains information on job search skills, career planning, networking, mentoring, professional registration and personal development. We hope that the handbook will be a valuable reference source as you move through the different phases of your career.

I wish you well in your career and trust that you will share and grow in the values of our institute.

Best wishes

Tshepo Mmola

Young Professionals Council (SAIMM), Chairman

SAIMM Young Professionals' Council (SAIMM-YPC)

Purpose

The Young Professionals Council of the Southern African Institute of Mining and Metallurgy (SAIMM-YPC) is constituted to develop

and promote initiatives and industry awareness of the members of the Institute below the age of 35 years and to provide an alternative perspective to Council (SAIMM) to consider in its decision-making.

Mission

The SAIMM-YPC is committed to the SAIMM charter, viz., to:

- Render professional services of high quality to its members and to continually improve these services by keeping abreast of technological developments
- Apply professional ethics in all its activities and encourage members to follow suit
- Fulfil its obligations towards the community and the environment
- Continually strengthen its image as a dynamic organization by playing a leading role in the initiation and implementation of new ideas and by organizing events around topical themes
- Diligently promote the interests of its members and to represent them in a competent manner
- Bring the mining and metallurgical fraternity, research and education personnel, and students, together in one organization and
- Judiciously anticipate the needs of members.

Activities

The activities of the SAIMM-YPC encompass but are not limited to the following focus areas:

- The role in influencing schools – from career guidance, mathematics, science, tutoring life skills, *etc.*
- The role in universities – from the selection processes to the alignment in getting the degree and its uses in the industry
- The role of business – from best practice, training programmes, mentoring programmes, and development
- Influencing other bodies such as ECSA, DMR, AMMSA, *etc.* for the benefit of all young professionals
- Influencing service providers outside the mainstream who provide secondary services
- Instituting entrepreneurial activities that will serve the requirements of young professionals.

Job search skills

The most common skills and capabilities that companies look for from all employees, irrespective of the industry sector, are:

- Effective written and spoken communication
- Good time management
- Self-driven
- Strong work ethic
- Teamwork and leadership
- Critical and analytical thinking
- Ability to take the initiative.

This section is aimed at providing graduates with skills for job searching, focusing on networking skills, development of a résumé, and creation of a covering letter. It also provides interview tips.

The first step in job searching is to be pro-active. Some ways in which to be pro-active are:

- Start networking, find out about job leads, and be ready to provide your résumé. Be able to introduce yourself within a minute, stating your name, work experiences, and/or qualifications
- Frequently visit company websites for job posts, and call the business to check availability of the position
- Use the employment agencies to place your profile and receive job alerts that suit your profile., These services are usually free
- Learn how to market yourself (remember you are unique). Be able to answer these questions at all time: Why should the company hire you? What contribution do you see yourself making to this company?

Currently companies may not be analysing applicants' social media profiles; however, a company can request to view your profiles. Be careful that your activity on these sites does not jeopardize your chances. Keep your professional image in mind when using social media platforms.

Networking

- Dress professionally, avoiding strong cologne, chewing gum, revealing your tattoos, and/or smoking before-hand – people have different preferences
- If possible, get a list of delegates attending the meeting, and prioritize those you would like to meet and plan your strategy accordingly
- Keep your cell phone on silent, you do not want any distractions
- Greet the person with a firm handshake and a smile then introduce yourself, be polite. Remember a smile is priceless
- Listen carefully to the person you are interacting with, avoid distractions
- Thank the person for their time and request their business card
- Some days later, follow-up with a thank-you letter, you may attach your résumé.

Networking: <http://www.state.gov/documents/organization/107878.pdf>

Covering letter

A covering letter must accompany your CV as it provides you an opportunity to highlight your abilities and experiences that are ideal for the employer. You need to demonstrate that you know something about the company in your covering letter. This can be achieved by using the job description to draw connections between yourself and the position. This provides an opportunity for the employer to assess whether you are able to write, communicate, and articulate your thoughts effectively. Hence, avoid waffling and ambiguity. There are various covering letter templates in the public domain which are a click away on the Google search engine. Employers would normally spend less than 30 seconds scanning your CV, and if they like what they see, then they will read your covering letter and résumé.

A Few tips to consider are: avoid using the word 'I' where possible; provide examples of 'soft skills' by form of examples; your covering letter should have three to four paragraphs; if you have little work experience, emphasize your voluntary work; use action verbs; and close by asking for an interview and thank the company for their consideration.



Résumé

Résumés serve only one purpose: that is, to get you an interview. Keep in mind that employers have about 30 seconds to read résumés. A résumé is a brief introduction covering your education, experience, accomplishments, and skills relating to your career goals. The résumé acts as a salesperson marketing the product (you) to the consumer (company). How you market yourself in your résumé will determine whether you are granted an interview. Note that a résumé does not guarantee employment – its purpose is to get you an interview. Tailor each résumé to the specific employer and position you are interested in. There are different types of résumé (chronological, functional, and combination), but discussing them is beyond the scope of this booklet.

Although there are different types of résumés, they all cover the following common items:

- *Heading*—your name, address, phone number, and email address
- *Objective*—the specific job you are applying for and the name of the company. A summary includes specifics as to why your background would make you a good hire for this job
- *Education*—start with your most recent education (and then go back in time) and include the name of the school, location, date of graduation, and your programme. Do not include high-school education
- *Position-related skills*—if you have little work experience, highlight your specific skills as they relate to the job and your qualification(s)
- *Projects*—include school projects that relate to the job description
- *Work experience*—work can include full-time and part-time jobs, internships, and clinical and volunteer experience
- *Achievements/volunteer experience*—any awards or honours that you may have received or activities that you have participated in, both in school and in the community.

Résumé and covering letter http://www.cabrillo.edu/services/jobs/pdfs/resume_guide.pdf

Interview tips

If you are shortlisted for an interview, remember that you are one of a few candidates. Be ready to market yourself and dress for the occasion. Research the company (past and current information) and prepare questions to ask when offered an opportunity. Appropriate dress cannot be emphasized enough.

Preparation

- Research the company's values and strategy and be informed of relatively old and more recent news; know the company's mission and core values; be aware of any current news about the company and the industry
- The most likely question that you will be asked is 'tell us about yourself'. Therefore, have a clear understanding of yourself and what you bring to the company. Be ready to provide unambiguous examples of how you could add value to the company
- Before you present your CV, covering letter, and résumé ensure that someone has evaluated them
- Time is of essence. Be attentive when listening to the questions. When providing answers, remember that you are selling yourself

- Think about several strengths you have that relate to the position you are looking for
- Identify and turn around your weaknesses by describing how you have overcome them
- Develop a plan as to how you will further your professional growth (education, joining relevant associations and societies (ECSA, SAIMM, SANIRE) *etc.*)
- Know the duties and responsibilities of the job you have applied for
- Practice, practice, practice until you own your responses before going for an interview.

Interview process

- Dress professionally. Your outfit should not be too revealing, should cover tattoos, clothes must be clean and pressed. Remove body piercings that might be regarded as inappropriate
- Arrive at least 30 minutes early for the interview
- Have a solid handshake (no perspiring hands) that is sincere – let the interviewer take the lead
- Turn off your cell phone, this is the most important moment of your life
- Body language: use natural gestures – smile; sit up straight, and lean slightly forward; keep your arms uncrossed; establish eye contact; show interest and demonstrate a positive attitude by nodding where necessary
- Control your nerves by trying to relax through breathing, and exhibit patience
- Listen carefully before you answer any question
- Ask questions relevant to the position you are being interviewed for
- Stay away from questions related to salary, time off, and/or maternity leave
- At the end of the session, thank the interviewers for their time and ask when will you be hearing from them
- For development purposes, you may ask interviewers about how you can improve (preferably after you have received the outcome of the interview).

Research the most common interview questions as they apply to the position you applied for.

A list of job agencies in South Africa can be found at: <http://www.yellosa.co.za/category/employment-agencies>

Remember: it is not the person who says there are no jobs available that gets hired, but the one who keeps searching.

Career paths in mining

The duration of a graduate programme and the path to promotion are usually major concerns to recent university graduates who aspire to become managers, consultants, and leaders of industry. Unfortunately, many engineers view the practical period of their career as a waste of time. Few young engineers see the importance of practical learning *e.g.* learning track and pipe work, time as a miner. Always keep in mind that practical training enables you to gain sufficient knowledge to familiarize yourself with the fundamental principles of mining engineering, understand methods and processes, and establish fundamental skills.

Production mining

The pathway to promotion is as broad as the field itself, but

following the traditional career path of the South African graduate you can typically expect to go through the journey outlined in Table I.

Due to the lack of job opportunities under the current economic conditions, the time you will spend in each phase of development will be significantly longer than that shown in Table I. The longer timeframes will probably add to your frustrations as you aspire to reach the top management positions. Table I illustrates only one of many career paths. Should you not wish to follow a production-based career path, you may follow a technical, research, academic, governmental, financial, or entrepreneurial route.

Adapted from: The Young South African Mining Engineer in the 21st Century. Steven Rupprecht and Andre Dougall. University of Johannesburg, South Africa.

Technical services

The Chamber of Mines Examination Department arranges and administers all the examinations that are written by the Survey, Sampling, Ventilation, and Rock Mechanics disciplines. They are also responsible for the issuing of the appropriate certificates.

The Advanced Sampling qualification enables the candidate to do his/her job with more confidence and a knowledge that paves the way to their being able to occupy a senior position.

The Advanced Survey qualification is a prerequisite for being eligible to sit the examination for the Government Certificate of Competency.

The Mine Environmental Control qualification is required by the Mine Health and Safety Act (Act 29 of 1996) for persons who are responsible for the environmental control of the mine.

The Rock Mechanics qualification is required by the Mine Health and Safety Act (Act 29 of 1996) for persons who are responsible for rock mechanics at the mine.

More information is available at <http://www.comcert.co.za>

Alternative career paths

After obtaining an appropriate level of production experience, you can become a specialist consultant to the mining sector, an academic at any of the higher education institutions offering qualifications in the field of mining and metallurgy, a government inspector with the Department of Mineral Resources (DMR), or a researcher at one of several research institutes in the country. You should also appreciate that your engineering education makes you valued in many other sectors of the economy, such as retail and manufacturing, as well as in other professional services (legal, finance, management consulting *etc.*).

Position	Duration
Engineer-in-Training	12–36 month
Miner	6 months
Shift Supervisor	2–3 years
Overseer	2–3 years
Section Manager	3–5 years*
Production Manager	+5 years*
Mine Manager	+5 years*
Consultant	*

*Duration will depend upon the ability of the engineer and requirements of the company and/or industry

In order to improve the prospects of entering into these alternative career paths, you should plan from an early stage of your career to pursue postgraduate education and other formal courses to support your career choices and development, such as specialist software training. Following these alternative career paths is probably not as straightforward a process as that for the traditional production mining route. However, the section on 'Job search skills' provides you with tips on how to go about getting your ideal job.

Professional bodies

Every occupation has rules of practice, which students may not be familiar with. The onus remains on the practitioner (graduate) to learn and comply with the rules and laws that govern practice in his/her field. The engineering field has a large number of professional bodies that graduates can join in order to keep abreast with their respective sectors. This section discusses some of the professional bodies and highlights the benefits membership.

The Engineering Council of South Africa

The main role of the Engineering Council of South Africa (ECSA) is to regulate the engineering profession. ECSA is the only body in South Africa authorized to register engineering professionals and confer the use of titles, such as Pr Eng, Pr Tech Eng, Pr Techni Eng, and Pr Cert Eng on persons who have met the requisite professional registration criteria.

Benefit for individuals registered as Professional Engineer:

- Registration indicates that the ECSA Committee recognized that you meet the minimum requirements of a professional person. This recognition extends to all other practitioners and colleagues in the profession and instils confidence in your capabilities in the mind of the public, since the public is assured that your competence has been assessed by knowledgeable professionals in your field of expertise
- Many institutions, for example the South African Institution for Civil Engineering, require that a person be registered as a Professional Engineer before being granted corporate membership
- ECSA is a co-signatory to the 'Washington Accord' – an agreement by which the registering bodies in countries such as Australia, New Zealand, the United Kingdom, and Ireland recognize each other's accredited university degrees in engineering. This not only confirms that your academic qualification is internationally acceptable, but also enhances your marketability
- It is vital that all engineering graduates register with ECSA, because most companies have made registration with ECSA a prerequisite for certain positions
- ECSA has negotiated financial benefits for registered persons, such as reduced lending rates and increased investment rates
- Being registered with ECSA as an engineer offers you an opportunity to use a particular name describing your particular type of registration, such as Professional Engineer (Pr Eng). It is a criminal offense to use any of the titles mentioned in the first paragraph without them being bestowed on you by ECSA.

Visit www.ecsa.co.za for more information and registration processes

The Southern African Institute of Mining and Metallurgy

The Southern African Institute of Mining and Metallurgy (SAIMM) is a professional institute with local and international links that aims at assisting members to keep abreast of technological developments in the mining, metallurgical, and related sectors, as well as embracing a professional code of ethics. The SAIMM also attempts to fulfil what it sees as its obligations to various communities and the environment in terms of the Institute's Charter. In addition, the Institute is active in bringing together members of the mining and metallurgical fraternity (including students) in terms of research, shared experiences, and education.

The key objectives of SAIMM are to identify and satisfy the needs of its members, and to represent and promote the interests of its members.

Benefits of membership include:

- Receiving a bi-monthly Journal with a balanced content and of a high standard, which serves as a communication medium to keep members informed on matters relating to their professional interests.
- The opportunity to attend congresses, symposia, colloquia, schools, and discussion groups at competitive prices. Members attend such events at a discount.
- Participation in technical excursions and social events, which creates further opportunities for interactive professional association and fellowship.
- The opportunity to make a contribution to the minerals industry in South Africa.
- The opportunity to network with a wide cross-section of professional people in the minerals industry.
- Official recognition of achievements.

Website: www.saimm.co.za

Association of Mine Managers South Africa

The Association of Mine Managers South Africa (AMMSA) serves professionals in the mining industry by exposing its members to collective industry innovations by way of monthly district meetings, quarterly general meetings, and the annual general meeting, industry days, and technical visits. The Association also provides mentorship and networking opportunities through safety summits, gala dinners, and golf days.

The benefits to AMMSA members are:

- Representation of the profession on other professional bodies
- A communication conduit for the mining industry, which helps to remove barriers and promotes interaction to facilitate the transfer of knowledge and ideas between people from different operations
- A forum for the dissemination and publication of technical presentations and papers
- Recognition of safety achievements of AMMSA members
- A system that enables members to satisfy application procedures for professional status
- An opportunity for continuous professional development.

There are different membership grades (classes), from student membership to honorary life membership.

More information can be found on the AMMSA website: www.ammsa.org.za

The South African Colliery Managers' Association

The South African Colliery Managers' Association (SACMA) is an

organization of Colliery Mining Managers, representing eight mining houses and some smaller operators, with 43 mine operations in four provinces.

Visit www.sacollierymanagers.org.za for more information.

Geostatistical Association of Southern Africa

The Geostatistical Association of Southern Africa (GASA) was founded to promote the professional interests of geostatisticians by:

- Increasing cognisance of geostatistics and the application of spatial statistics in southern Africa
- Enabling communication between practitioners in the industry
- Signifying the opinions of professional geostatisticians to the public and industry.

GASA holds courses and provides a community for members to meet other geostatisticians and learn more about geostatistics through attending events and courses organized by GASA. The Association provides graduates with the same benefits as any ordinary member. Further involvement/benefit comes from a willingness to contribute and get involved – the organization is a non-profit and relies on the contributions from its committee and members. Costs of membership are R200 per year, or R2000 for lifetime membership (once-off).

Geostatistics was developed in the context of the mining and petroleum industry; however, it can also be applied in other sectors such as environment, agriculture, forestry, fisheries, and epidemiology.

Information on becoming a member of GASA can be found on the website: www.gasa.org.za

Institute of Mine Surveyors of Southern Africa

The primary objectives of the Institute of Mine Surveyors of Southern Africa (IMSSA) are to advance the science and practice of mine surveying and related disciplines, to promote and safeguard the character and interests of the mine surveying profession, and to foster professional protocol through the adherence to the Professional Code of Conduct.

IMSSA is affiliated to the International Society for Mine Surveying (ISM) and the South African Council for Professional and Technical Surveyors (PLATO), which is the IMSSA's registration body. IMSSA is actively involved with the education and training of mine surveyors.

Website: www.ims.org.za

Mine Ventilation Society of South Africa

Visit www.mvssa.co.za for more information about the MVSSA.

South African National Institute of Rock Engineers

The South African National Institute of Rock Engineers (SANIRE) promotes advancement of the discipline of rock engineering through the following objectives:

- Encouraging interest and the advancement of education in rock engineering
- Maintaining professional practice and a high standard of ethics
- Encouraging networking, collaboration, and information exchange
- Identifying, promoting, and facilitating rock engineering related research

- Providing access to the global rock engineering fraternity through the International Society for Rock Mechanics (ISRM).

More information about SANIRE can be found at:

www.sanire.co.za

Mentorship

Mentorship is a very important aspect of career development, because regardless of how brilliant a graduate is, they can always benefit from the knowledge and experience of those who have gone before them. It is important to find a good mentor as early as possible in one's career. Some companies offer a mentorship programme for their graduates, but if the graduate is not proactive, this becomes nothing more than a paper exercise. So understanding the importance of mentorship and how to incorporate it into a career development plan is vital for any graduate.

Finding a good mentor is the responsibility of the graduate, regardless of whether or not your company has a formal structure to facilitate this process. As the party set to benefit the most from a mentorship relationship, the graduate should be proactive in developing and maintaining such a relationship. A good mentor should be someone who has advanced further than you in your chosen profession, but who is still in touch with the challenges you may be facing in your current role. Therefore as exciting as the idea is, having an executive of a multinational mining company as a mentor may not be the most appropriate mentorship relationship for a graduate. Senior executives are mostly concerned with grooming people at a senior management level, who can benefit mostly from their mentorship, as their successors.

A good mentor would have gone through the path that you are now on and has the benefit of providing you with a wider perspective when dealing with challenges or determining a direction for your career. As a graduate beginning your professional career, you may face situations and challenges that are completely new to you, and for which you are not prepared. Having a mentor as a sounding-board and source of advice can prevent you from making career-damaging mistakes, and allows you to impress your superiors by handling situations and challenges with the wisdom of a more experienced person.

The characteristics of a good mentor include, but are not limited to, the following:

- A willingness to teach what he/she knows and accept the mentee where they currently are in their professional development. Good mentors remember what it was like when they were just starting out in the field. The mentor does not take the mentoring relationship lightly, and understands that good mentoring requires time and commitment and is willing to continually share information and their ongoing support with the mentee
- A good mentor exhibits the personal attributes it takes to be successful in the field. By showing the mentee what it takes to be productive and successful, they are demonstrating the specific behaviours and actions required to succeed
- Good mentors feel an investment in the success of the mentee. Usually this requires someone who is knowledgeable, compassionate, and possesses the attributes of a good teacher or trainer. Excellent

communication skills are also required. A good mentor is committed to helping their mentee find success and gratification in their chosen profession. Overall good mentoring requires empowering the mentee to develop their own strengths, beliefs, and personal attributes

- A good mentor is enthusiastic about his/her job. Enthusiasm is catching, and new employees want to feel as if their job has meaning and the potential to create a good life
- Mentors are in a position to illustrate how the field is growing and changing, and that even after many years there are still new things to learn. Anyone who feels stagnated in their current position will not make a good mentor. When starting out in a new career, people want to feel that the time and energy they spend learning will be rewarded and will ultimately provide them with career satisfaction. Good mentors are committed and are open to experimenting and learning practices that are new to the field. They continually read the professional journals and may also write articles on subjects in which they have developed special expertise. They are passionate about sharing their knowledge with new people entering the field, and take their role seriously in teaching their knowledge to others. They may choose to teach or attend classes to further develop their knowledge and skills. They enjoy taking workshops and attending professional conferences provided through their membership of professional associations
- One of the key responsibilities of a good mentor is to provide guidance and constructive feedback to the mentee. This is where the mentee will probably grow the most, by identifying their current strengths and weaknesses and learning how to use these to become successful in the field. A good mentor possesses excellent communication skills and is able to adjust their communication to the personality style of the mentee. A good mentor will also provide the mentee with challenges that will foster professional development and a feeling of accomplishment in learning the field
- Ideally, mentees look up to their mentors and can see themselves filling the mentor's role in the future. Mentees want to follow someone who is well respected by colleagues and co-workers and whose contribution in the field is appreciated
- A good mentor continually sets a good example by showing how his/her personal habits are reflected by personal and professional goals and overall personal success
- A mentor who values others is also someone who works well in a team environment and is willing to share his/her success. A good mentor appreciates the ongoing effort of the mentee and empowers him/her through positive feedback and reinforcement
- A mentor motivates others by setting a good example.

(Source: *Top 10 Qualities of a Good Mentor.*

<http://franchisegrowthpartners.com/mentoring>)

Some guidelines to starting a mentorship relationship include:

- Identify a mentor at an appropriate level in an organization. A guiding principle is that a mentor should be at least one level above your current position, but no

more than four; beyond this point mentors cease becoming truly relevant to your progress. Also, try to avoid having a mentor in your direct line of reporting, as this may result in conflict between mentorship and professional relationships

- ▶ Having several mentors can be beneficial. A mentor close to your current level in the organization can help you deal with day-to-day professional issues, as they often tend to be more accessible. A mentor who is more advanced in their career can help you with overall career and personal development
- ▶ Identifying mentors outside your organization is also valuable, as these types of mentors can provide you with a wider perspective
- ▶ As with any new relationship, the mentee has to sell him/herself in a mentorship relationship. Demonstrate enthusiasm and initiative to your prospective mentor, in order to generate enthusiasm around the prospect of mentoring you
- ▶ When approaching a stranger to mentor you, a direct approach where you ask: 'Can you be my mentor?' may not always be best. As a stranger has no pre-existing relationship with you, they may not be convinced that mentoring you will be a good investment of their time. It is often better to allow a mentorship relationship to develop by interacting with your prospective mentor, where you ask for practical professional advice.
- ▶ Be proactive in managing the mentorship relationship and respect your mentor's time. Understand that your mentor(s) has limited time to share with you, so initiate meetings on a regular basis with an understanding that your mentor has other commitments. Prepare for your meetings with your mentor by thinking about specific questions you have, and make note of any advice or references your mentor may direct you to.

It is important for graduates to note that not every mentorship relationship that you initiate will work out, but that mentorship is a very important pillar for developing a good career.

In the coming months, the SAIMM Young Professionals Council (YPC) will be establishing a mentorship programme aimed at helping graduates to develop the mentorship relationship necessary for their careers. Graduates are encouraged to keep checking the SAIMM website for further developments.

References on mentorship

- ▶ Ten Steps to Finding Your Mentor:
<http://powertochange.com/world/findmentor/>
- ▶ 10 Ways to be a Good Mentor:
http://www.blueskycoaching.com.au/pdf/v4i10_mentor.pdf
- ▶ The 3 Career Mentors Everyone Should Have:
<https://www.themuse.com/advice/the-3-career-mentors-everyone-should-have>
- ▶ 5 Simple but Strategic Steps for Finding a Good Mentor:
<https://www.themuse.com/advice/the-3-career-mentors-everyone-should-have>.

Career and personal development: recommended reading list

Books have always been, and remain, a good source of

knowledge. As a student in a tertiary institution, you can only go so far without opening your books and doing the learning yourself. Your lecturers can only do so much in teaching you the concepts that you needed for your technical development; the real learning often happens only when you go to the source of the concepts that were being taught in class, and struggle through the process of understanding them.

The development of non-technical skills that are necessary for career and personal growth should be approached in the same way as technical development, with young professionals actually reading the relevant books that address these issues. In the same way that a lecturer's intervention is limited in technical development, interactions with peers, superiors, and mentors is also important for developing the necessary non-technical skills for career and personal advancement. Reading the relevant books has the benefit of taking us to the source of the knowledge possessed by some of those who we most admire, and enriches our ability to learn from those people.

The SAIMM YPC would like to recommend some useful reading that can help you develop the skills for excelling not only as a professional, but as a person. It is our hope that this reading will be of value to you.

1. *So Good They Can't Ignore You (Why Skills Trump Passion in the Quest for Work You Love)*, by Cal Newport—In this compelling book, Newport argues against the 'follow your passion' job philosophy that we so often hear. He makes the case that very few people have a pre-existing passion that informs their career choice, and that such an expectation often leads to frustration. According to Newport, most successful people make a conscious effort to work hard and become good at what they do, and this eventually results in their overall success and job satisfaction. This is a good read for anyone starting their career and wanting to determine how best to approach their development.
2. *How to Win Friends and Influence people*, by Dale Carnegie—This has been a top-selling business book for over sixty years and is an essential read for any young professional wanting to develop their leadership abilities. The book focuses on the psychology of how people function, and helps the reader use this knowledge to their advantage and emerge as a leader.
3. *Never Eat Alone (and other Secrets to Success, One Relationship at a Time)*, by Keith Ferrazzi—Keith Ferrazzi addresses the very important skill of network-building. The author uses his personal experience to share strategies on how to reach out to people you admire and build a personal network that can help advance your career.
4. *Getting Things Done (the Art of Stress-free Productivity)*, by David Allen—This is a good read for anyone starting out their career, as it gives advice on issues such as time management (in the office and at home). It also talks to managing daily tasks while allowing for 'thinking space' to keep focus on long-term goals.
5. *Lean In (Women, Work and the Will to Lead)*, by Sheryl Sandberg—This book is aimed at women intending to have successful professional careers. The author highlights some of the things she believes women do to unintentionally that undermine their professional progress.

This list does not by any means purport to be complete, as there are countless other books that can help equip young

professionals for meaningful careers and lives; but these references provide a start to an endless journey of career and personal development.

For more reading ideas, you can refer to the article: 30 business books every professional should read before turning 30 (<https://agenda.weforum.org/2015/04/30-business-books-every-professional-should-read-before-turning-30/>).

Mining and metallurgy best practice graduate development programme guideline

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Purpose

The purpose of this best practice' guide is to contribute to recruitment and retention of local and regional talented and qualified persons in the disciplines of Mining and Metallurgical Engineering, and engineering in general in the mining and metallurgical industry. Its objective is to enhance the satisfaction of recent graduates as they make decisions in their early career development, and to provide a framework for companies that many not have a system in place to guide and assist recent graduates. The document introduces the different components that should be part of a graduate development programme. The actual details and implementation will dependent on the conditions in the company, as well as the individual graduate.

Why do we need a best practice?

Although South Africa has a vibrant mining and metals industry and a strong infrastructure to produce suitably qualified individuals for its future needs, many recent graduates leave the home country in search of greener pastures after two or three years of local employment. It is believed that some of the reasons for discontent in the early career years are as follows.

- Wrong impression of what the job entails
- Given responsibilities beyond their level of experience
- Work not challenging enough
- Lack of guidance in the work environment
- Better career development opportunities elsewhere.

The SAIMM believes that many graduates will find their own way in companies of their own choice. They will be guided by quality development programmes and will map out a career path that suits them and the company they belong to. However, the SAIMM also believes that the publication of a 'best practice' graduate development programme will assist not only the recent graduate, but also the smaller companies in making the most of the important early stages of the employment relationship. First impressions are important for both the recent graduate and the company. Of necessity, this 'best practice' is generic. The following components are suggested to form part of this programme.

Generic components of an engineering graduate development programme(GDP)

- Recruitment interview
- Employment contract

- Timeline for development programme
- Induction
- Career mapping
- Experiential learning
- Formal courses to support career choices and development
- Cultural adaption
- Mentoring
- Confidence building
- Career / Development progress evaluation
- Providing challenges
- Providing opportunities
- Inter- and intra-company placements
- Professional associations and symposiums
- Professional registration – ECSA
- Conflict indicators
- Establishing and utilizing talents
- Social integration
- Community development
- Individuality

Recruitment interview

It is common practice to arrange recruitment interviews, which are the start to the possible employment relationship. At the interview there should be frank and honest discussion of the future expectations from both the employer and the prospective employee. The discussions should be minuted or recorded for both the interviewee and the employer.

The interview should not be time-limited, and the graduate should be encouraged to interrogate the employer's expectations and the opportunities or problems that could be expected. The graduate may be given the opportunity, or be required, to place in writing his understanding of the important parts of the interview process, before finally accepting the employment conditions. One of the important discussion points will be the details of the development programme that the graduate will participate in. This will ensure no misunderstanding as the development of the graduate proceeds.

Employment contract

As well as the normal conditions of service for any employee, an employment contract with a recent graduate should include special sections dealing with the development programme. This will formalize the employer's expectations and ensure that the graduate understands the purpose and implications of the development programme.

Timeline for development programme

A graduate development programme for engineers should be a minimum of two years and be flexible, depending on the nature of the operations and the opportunities available. This timeline should be at least as long as it takes to complete a 'Stage 2 License to Practice' type qualification *e.g.* ECSA registration.

Depending on the company's long-term objectives, the development plan could be as long as five years. After this length of time it would be expected that several levels of work have been concluded and that the graduate would have reached a substantive position in the company structure that is commensurate with the investment in the development programme.

Milestones must be identified in the development programme.

Induction

All engineering graduates should be given a comprehensive induction into the company. This will involve activities such as occupational health and safety courses, visits to all sections of the company, and meeting with senior managers and executives across the broad range of activities of the company. The induction should take at least two weeks and be as comprehensive as possible. It could include such social functions as lunch with the executive team and an introduction to social activities and to other similar individuals.

Career mapping

Any career development programme should have a long-term objective – ‘Where would you expect to be in 10–15 years?’ The development programme should be aimed at this long-term perspective and include the typical timelines for steps to be completed towards the goal. A graduate will always have ambitions (whether realistic or not) that involve a long-term view, and the objectives of the development programme should be aligned with this long-term view. This component will (like many others) be adjusted to meet the reality of the individual’s progress through the development programme.

Experimental learning

Many graduates will have unrealistic expectations of their abilities in the real world of work. The gap between academic learning and the operations of an organization is particularly wide in the engineering disciplines. Experiential learning is the learning that takes place in the work environment, dealing sometimes with routine operational matters that the graduate could find particularly challenging (getting your hands dirty). This would be particularly true in most careers in the mining and metallurgy fields. The graduate may feel that the operational components are below their level, while the company expects the graduate to be particularly skilled in these operational aspects. This conflict situation must be resolved by the formal inclusion in the graduate’s development programme of the detail of experiential learning required by the company. Time periods for the operational components of experiential learning should be limited to ensure that the graduate realizes that this is for the purpose of development and understanding rather than operational performance. The development of any graduate will depend on his/her life experiences. Flexibility must be maintained in the programme to develop the necessary skills before progressing to new areas of development.

Operational work skills breed a different type of confidence than academic university skills. Attempts must be made in the development programme to integrate academic skills with operational skills. This is best done by including project work with the operational skills development so that a degree of intellectual activity can be incorporated into the operational skills development. As an example, a mining engineer who is required to learn how to charge up blast-holes with explosives could also be assigned a project on methods for tamping of holes. This ensures that intellectual capacity is included, and may result in a positive improvement in operations. This will in turn build the graduate’s confidence.

Experiential learning should be supervised by an experienced and qualified person. Care must be exercised in the selection of the supervisor so that the maximum benefit is achieved and good work habits are cultivated.

Formal courses to support career choices and development

Graduates are employed by companies for different purposes. Any development programme for graduates must include both in-house and external, formal development courses where the graduate would be expected to gain theoretical and/or practical knowledge for the purpose of employment. Beyond the purely utilitarian courses, the graduate should be given the opportunity to develop a broad range of additional knowledge linked to the company operations. One would hope that the purpose of employment of a graduate would be to develop such a person into senior positions, and this would be achieved by broad development and promoting the habit of lifelong learning. Topics such as conflict management, report writing, assertiveness, language proficiency, communication, project planning, personal finance, management finance, specialist software *etc.* as appropriate, should be included in the development plan. Individual performance and interest in the courses must be monitored.

The need for special courses could be identified through formal psychometric tests – naturally, graduates arrive in the company with different levels of positive attributes and deficiencies. A strong graduate development programme will include psychometric tests to identify areas of strength and weakness. A graduate should admit existing weaknesses and be grateful for the opportunity to overcome these weaknesses through interventions supported by the company.

Even physical fitness may be a requirement, and in any case, any graduate should be convinced that mental and physical fitness result in better work performance. This could well be included in a comprehensive graduate development programme.

Cultural adaptation

Every company has a corporate culture. The graduate should be made aware of the company norms of behaviour (*e.g.* dress code), timekeeping, bureaucracy, reporting formalities, protocols, outside work activities (community work), expectation *etc.* that are seen as an important part of cultural adaptation. The graduate should be exposed to these aspects as early in the development programme as possible.

Mentoring

Beyond the formalized training activities and line management functions, every recently employed graduate should seek out (with the aid of the company) a suitable mentor. Such a person would normally be within the company, but this may not necessarily be so. A mentor would be some person who has reached a senior position in the direction that the graduate wishes to follow. The mentor would not be within three line-management levels of the graduate. The purpose of explicitly including such a person in the development programme is to ensure early detection of problems and to maximize the potential of the graduate. The mentor would be selected by the graduate. Formalized, regular interaction would take place between mentor and mentee with discussions on both work and social problems and opportunity areas.

Confidence building

Included in the individualized graduate development programme, there would be a programme of ‘confidence building’. If areas of weakness have been identified, then logical small steps are taken

to overcome the weaknesses through the inclusion of meaningful step-by-step confidence builders. In any event, confidence must be justified by the achievement of certain goals within the development programme. This could include such items as visits to the workplace by senior officials, panel interviews, work project reports of success *etc.*

Career/development progress evaluation

Formalized progress interviews conducted by senior officials must be incorporated into the graduate development programme. These would be more frequent at the start of the employment contract, *e.g.* every three months during the first year and at least twice per year in the subsequent years.

Providing challenges

Any graduate needs to be intellectually challenged, particularly in the early stages of the employment contract. The graduate should be given substantive research work that is appropriate to the long-term outcomes of the development programme. Responsibility should be given for substantive work as early as practically possible. A graduate without challenges will become dissatisfied and stagnate.

Providing opportunities

Graduates are innovative. Opportunity should be given as early as possible for the graduate to make a substantive contribution appropriate to his skills. This can be in the work environment or the social environment. Opportunities for self-development should be provided and supported. The innovative spirit must be nurtured for the long-term development of the graduate.

Inter- and intra-company placements

As opportunities arise and wherever possible, the graduate should visit or work in as broad a range of activities as possible during the development programme. International perspectives have a positive influence on the operations, especially if applied through youthful intellect. The positive results of such opportunities will impact both on the graduate and the company. Intra-company visits and work opportunities in different sections of the operations give great perspective and develop the graduate optimally for the long-term.

Professional associations and symposiums

During the GDP, the graduate should be encouraged to become a member of the appropriate professional body or learned society, and to participate in its activities.

Professional registration – ECSA

As a qualified engineer expected to do 'engineering work' as defined in the Built Environment Act, the graduate must be supported and coached in accordance with the requirements of ECSA. The graduate should register as a 'Candidate Engineer' at the appropriate level for the work he is expected to be involved with in the long term – Professional Engineer, Professional Engineering Technologist, Professional Engineering Technician, or Professional Certificated Engineer. This registration also depends on the base qualification. Supporting Engineering Professional mentors should be appropriately identified and approached. ECSA stage 2 professional development towards appropriate registration should be monitored as progress occurs.

The whole of the ECSA registration process should be part of the graduate development programme unless the choice of career path is not particularly related to engineering work.

ECSA demands Continuous Professional Development (CPD points) activities. These activities must be carried out at accredited engineering functions so as to ensure lifelong learning. This is in line with the requirements of a successful graduate development programme.

Conflict indicators

Recent graduates may become despondent or frustrated at some time during the development programme. Mechanisms must be put in place to identify these conditions so as to maximize the effective development of the individual. Reporting and communication must be a major component of the development programme. This, together with open dialogue, will ameliorate the effects and provide for early detection of such conflict conditions.

Establishing and utilizing talents

Graduates will often bring with them far more than just technical academic knowledge. These attributes or talents may be utilized and developed further during the development programme to the benefit of the graduate and the organization. Particularly such skills as teaching, sport, and music could be considered. The graduate should be encouraged to participate in the development of others using his additional talents or skills. This will develop community engagement and respect within the community.

Social integration

Graduates must be integrated into the community as well as in the work environment, and should be required to present themselves in socially acceptable ways. This could be in terms of cultural understanding (appropriate behaviour in special conditions), etiquette, dress, introductions, names, public speaking, presentations *etc.* Such development should form a part of the graduate development programme.

Community development

Graduates must participate in community projects on a 'voluntary' basis. This should be a part of the graduate development programme.

Individuality

Although there are generic components to the ideal graduate development programme, it must be emphasized that each programme should be tailored to take into account the particular discipline of the graduate, specific needs of the graduate, and in particular, requirements of the company.

T. Mmola

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