

Ubuntu in the Engineering Workplace: Paying it forward through Mentoring

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Abstract

Research reveals that South Africa is facing a critical skills shortage. Companies are struggling to source engineering professionals for their ongoing operational success. In order to retain critical engineering skills, young engineers should be provided with inspirational mentorship. Despite South Africa's move to a democracy, its workplace is still mired by social inequalities. Organisations aiming to harness diversity should create a culture of respect and accessibility so that all employees can reach their full potential. While many studies focus on the importance of mentorship, little has been said about the value of Ubuntu in mentor-mentee relationships. The paper argues that for an inclusive workplace, the answer lies in Ubuntu. By practising Ubuntu, mentor engineers can contribute to the direly needed professional development of young engineers. Ubuntu is an African philosophy which acknowledges that one's own humanity is interlinked with the dignity and humanity of others. Ubuntu is forgoing one's personal interests for the benefit of people around you, while growing together as a community. The study aimed to establish that instead of looking at individualistic solutions, we should embrace mutual growth and empowerment. The author used questionnaires with closed and open-ended questions to collect data. Fifty engineering professionals in different fields and from different cities in South Africa participated in this case study. The data were analysed inductively as well as deductively. Mentorship was identified as an important aspect of Ubuntu. It was recommended that engineers practise Ubuntu in their workplace to cultivate an ethos of community and mutual respect.

Keywords: Ubuntu; social responsibility; engineers; mentorship; humanity; skills shortage



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Introduction

Engineering is about solving problems of the world by applying knowledge of mathematics and science. “Engineers accomplish this by either refining an existing product or process or by designing a new product or process that meets customers’ needs” (Montgomery 2003, 2). Engineering is not just about machines or technology; it is better understood in the context of how it impacts society. The role of engineers is made evident in the context of their work within an organisation that is part of a society (Royal Academy of Engineering 2016, 5).

McCarthy (2016, 29) supports this view by stating that engineering has influenced the world “physically, digitally, socially and economically.” The amenities of our daily lives and the standard of living that most of us enjoy can be attributed to engineering. While engineers’ role in our society is of great responsibility, it also presents an opportunity to have a positive influence on society. Besides utilising the technical aspects of the profession, engineers might be required to make ethical and financial decisions, consult and negotiate with different stakeholders, consider the effect of their decisions and ensure the safety of their products, people and the environment.

In the past, engineers embarked on developing new products and technologies without considering their social, economic and environmental impact. Little attention was paid to assessing or minimising the concomitant risks of technical innovation. In today’s world, engineers not only have to find solutions to problems when they occur, but they also have to anticipate and make provision for them in their design. These problems could include “potential catastrophes such as water and food contamination; infrastructure damage to roads, bridges, buildings, and the electricity grid; and communications breakdown in the Internet, telephony, radio, and television” (National Academy of Engineering 2004, 24).

In terms of their work, Steiner (2004, 5–6) explains that engineers need to be in constant touch with other engineers while solving problems. Their interpersonal relationships have an immense impact on the success of their project. “We have turned 180 degrees from the lone genius working in the garage to a global collaborative model” (Camuti 2006, 4). Now, new technologies come into shape after a long process of team cooperation across continents. Engineers are required to work in teams with other engineers to accomplish their common goals. The team members have to interact effectively amongst themselves and with both superiors and subordinates. The success of the entire team depends on each individual member, and if one engineer becomes indifferent to what others are doing, the whole group suffers (Visser, Naude, and Scheepers 2004).

Engineering and Social Responsibility

With authority comes responsibility. Engineering has played an important role in the development of societies around the world. However, at the same time, engineering has

caused considerable harm. Therefore, it is important to recognise both the benefits and risks of engineering (Bielefeldt 2017, 2). The 21st century has brought a variety of unprecedented challenges. These challenges include global warming, pollution of air and water, cancer resulting from poor industrial waste disposal, and a loss of biodiversity. These challenges tend to discredit the role engineering has played in the upliftment of humanity. “These problems, many of which are produced by technology, must also be resolved by technologists” (Beagon, Tabas, and Kövesi 2019, 5). The engineers of the future have to realise what impact their products will have on society and the environment in general.

Besides environmental responsibility, engineers also have a responsibility towards people, including their colleagues and the public. Engineering is not only about driving change through megaprojects for the rich nations. It is also about improving the lives of underprivileged communities around the world. Engineers design wind turbines and micro-hydro systems in areas out of the reach of national grids. For some inhabitants of these areas, this could mean having light at night for the first time and being able “to charge batteries enabling them to start a business that will provide enough food for their family. Other engineers work on ways of cleaning water so children are less likely to get sick from diseases carried in water” (Brown 2020, 2).

This means that the engineering profession is deeply rooted in the human condition, and it aims to use technology to meet the needs of all communities, big or small, rich or poor. The engineers’ awareness of their social responsibilities grows with time through the process of professional socialisation. This growth through socialisation can begin in early life and can continue through their engineering education to their professional life (Bielefeldt 2018, 9).

Professional socialisation that can engender social responsibility among engineers can take the form of engineers interacting with their communities or with other engineers as mentors or mentees. Smith, Gardoni and Murphy (2013) identify it as one of the responsibilities of engineers to “strengthen their community of engineering practitioners” (Smith et al. 2013, 13). There are several ways to achieve this. For example, they could share their knowledge and mentor other engineers by participating in research activities.

Bielefeldt (2018, 6–7) identifies pro bono work that engineers can perform to help build their communities. Similar to the fields of medicine and law, engineers should also consider assisting individuals or companies that are not able to compensate them. Pro bono work can also take the form of community engagement where engineering students can learn about the social impact of their activities when engaging with the public.

Skills Shortage in South Africa

Compared to the international benchmark of availability of engineers serving an average population, South Africa trails behind other developing countries. “In South Africa, one

engineer services 3 166, compared to Brazil's 227 and Malaysia's 543 per engineer. The discrepancy in the benchmark points to one thing: South Africa is severely under-engineered" (ECSA 2021, 1).

According to a critical skills survey report conducted by Xpat Web (2021), engineering is the most in demand skill in South Africa. The survey is conducted annually across an extensive range of multi-national and corporate organisations in South Africa.

A large majority of organisations are battling to recruit individuals with critical skills for their local and global operations. These companies have further confirmed that they would be searching internationally to meet their business objectives.

Sourcing critical skills globally may solve an immediate problem which businesses are facing, however it does not necessarily address the wider challenge of the systemic critical skills shortage that has plagued South Africa for at least the last two decades. (Xpat Web Survey 2021, 8)

The skills shortage is attributed to poor skills transfer and succession planning. There is a need for senior skilled professionals to engage with young professionals to develop the much needed scarce skills in South Africa. Addressing the skills shortage, Cilliers (2016) identifies a lack of new projects and reduced investment in addition to the outflow of experienced professionals. She suggests enlisting independent contractors to retain and transfer skills.

This will not only provide entry-level engineers with access to experienced engineers who can act as mentors, but also serves as a mechanism to retain much-needed skills and expertise to avoid a skills shortage in the next twenty years. (Cilliers 2016, 5)

Mentoring Crisis

A mentor (in the engineering milieu) is someone who guides and facilitates the professional development of an engineer (ECSA 2017, 15). Mentorship is essential for attaining the competence required for professional registration. The R-01-P document by the Engineering Council of South Africa accepts a minimum of three years' training and experience for this purpose. The deficiency of experienced engineers has resulted in many engineers finding it hard to meet the registration requirements (SAICE 2014). The development of graduate engineers was historically practised by organisations and municipalities, however, a move to the lean organisational model has resulted in the removal of these programmes. Many companies employing engineering graduates have disorganised developmental programmes and there is no mentoring available (ECSA 2021, 2).

Submissions made by the Professional Engineering Council of South Africa, to the Public Works and Infrastructure Committee in 2019, identified challenges of non-registration of engineering graduates. Graduates need to be employed to obtain

registration. Black candidates are struggling to find employment as well as mentorship. Those who do secure employment stay unregistered due to the lack of suitable mentors. Most private companies do not provide young graduates with mentorship opportunities. The problem with registration being voluntary and not mandatory leads to further problems where the unregistered professionals do not have indemnity insurance. In addition, they are unable to compete globally (Parliamentary Monitoring Group 2019).

In their study, Akerele, Vermeulen, and Marnewick (2019, 136) found that “mentoring can foster the acquisition of the practical skills required for the engineering graduates to be attracted, integrated and established in the industry.”

Giving back through Mentorship

“Transitioning from college student to full-time professional can be challenging. You may have the necessary technical skills, but navigating company politics and adapting to the office culture is difficult” (Howell 2016, 4). “Mentors act as a teacher, friend, guide and encourager” (Business and Professional Women 2019, 1). Mentorship is especially significant in today’s world where downsizing is common, and employers expect the graduates they employ to have skills they might not have been taught (Smith 2008). Mentors can help young professionals to learn about their contexts and the expectations of their new roles. They can inspire new professionals to gradually find their footing. In exchange, mentors can enjoy a feeling of fulfilment in transforming someone’s life by helping them progress. Relationships of respect, care and trust are born.

While mentees can develop their confidence through the advice and encouragement that they receive from the mentors, the latter have an opportunity to practise their leadership and interpersonal skills. Mentors can view their practice with a fresh outlook and receive further recognition of their skills from their peers (Business and Professional Women 2019). Both the mentor and the mentee can introduce one another to people inside and outside their organisation who will help them expand their network and help in their career development (Poulsen 2014, 3). Orosz (2019) agrees by saying that mentorship relationships help the mentors to grow their skills of leadership, listening and teaching and provide them with a network of supportive companions. Successful mentoring relationships also assist mentors in being promoted to higher levels. He argues that by sharing their expertise with less experienced colleagues, mentors help them to understand their new environments, tackle problems through different angles and guide them to grow in their careers. At the same time, mentees need to be committed to the relationship and not waste their mentors’ time.

O’Donnell (2010, 32–33) expresses similar views about mentoring programmes for engineers in South Africa. She argues that mentoring is essential to address the shortage of skilled engineers in South Africa:

The mentee will gain the technical experience and advice of someone with years of experience in the industry, accelerating his or her becoming a registered engineer and reputable professional.

The mentor has the duty and the opportunity to transfer knowledge and get to know the up-and-coming young leaders of the future, as well as guide, shape and develop the careers of these young professionals. (O'Donnell 2010, 32–33)

Chris Jones, who won the Mentor of the Year award at the 2010 Consulting Engineers of South Africa Awards (CESA), maintains that to be able “to pass on lessons gained through his experiences and those of his generation ... to help them avoid going through the same thing” (Jones 2010, cited in O'Donnell 2010, 35–36) was an important stimulus behind mentoring.

Mentors can play an important role in retaining women and diversity in engineering. Women who have achieved promotions dedicate their success to excellent mentors. Mentorship partnerships between men and women could break down the barrier that may exist in the workplace. Women are likely to stay in the company and rise up the ranks if they have a helpful mentor. Inclusion can have people feel more committed to the company, and want to stay longer. (Cunningham 2016, 3).

Green-Powell (2012, 6) concurs by stating that mentorship has benefits not just for the mentor and the mentee, but is rewarding for an organisation as well. It can increase employee satisfaction by reducing a new employee's feelings of isolation, thus helping in retention. Effective mentoring builds a positive image of the organisation and helps promote diversity in it.

A mentor-mentee relationship does not have to be formal. A mentor can be anyone generous and kind enough to show novice engineers how certain things are done. The people thus helped can pay the kindness forward by pointing others in the right direction, and showing them the light and supporting them in their career paths (Orosz 2019). “Some of the most successful, enriching, and lasting mentoring examples informally span years and cross industries as one-on-one relationships” (Smith 2008, 5).

Another myth that Smith (2008) dispels is that mentors have to be experienced sages. Mentoring is simply the sharing of knowledge or understanding to fulfil the need of someone struggling. Mentoring satisfies the basic human need of being part of something larger than ourselves and of having a purpose in the overall profession.

Similarly, even experienced engineers should not disregard the idea of becoming mentees to younger or older engineers. If they are struggling with, for example, new technologies such as new software programmes, they should seek guidance from someone willing to help (Smith 2008).

Challenges of Diversity in the South African Workplace

Managers working in the South African context are confronted with multi-dimensional challenges of diversity in the form of race, culture, language, education and access amid the historical legacy of apartheid. South Africa is ranked as one of the most unequal societies in the world (Specht 2021).

As human beings we tend to stereotype women, black people, white people, those with rank, those with different sexual orientations, with disabilities or anyone who we perceive to be part of the so-called “out” groups. This way of thinking still influences how appointments and promotions in organisations are made, how leaders interact with subordinates, how various cultures interact in the workplace. (*Fasset* 2013, 3)

Steyn (2013, 15) concurs with this view by stating that despite the political and legal transformation since 1994, social divisions and inequalities are still entrenched in our society.

Bruhns (2017, 1–4) conducted a large-scale study to investigate the challenges involved in managing diversity in administrative environments. She found that leading organisations have failed to manage diversity within their establishments. Furthermore, it was found that the way diversity is managed can impact the development of employees’ competencies.

Rationale of the Study

Diversity can either result in an opportunity or a predicament. Business leaders are learning to recognise the importance of promoting organisational goals while enabling employees to maximise their potential and feel valued and respected in cohesive environments. However, managing diversity is not a short-term process (Bruhns 2017; Steyn 2013). Prejudices do not disappear automatically. “A transformation of heads and hearts (attitudes), behaviour, policies and procedures” is required to ensure that an organisation can “become a place where all can thrive” (*Fasset* 2013, 3).

This is where the humanising philosophy of Ubuntu comes into place. Mangaliso and Damane (2001, 25) argue that despite its spirit of harmony and continuity, Ubuntu has not been embraced in the workplace because managers do not appreciate the strategic advantages Ubuntu can offer.

Several other authors (Molose, Goldman, and Thomas 2018; Nzimakwe 2014; Khomba 2011) advocate for the inclusion of the humanistic philosophy of Ubuntu in professional settings. However, applying Ubuntu in the engineering workplace to promote mentorship—especially for young engineering graduates—has not been explored yet, and is the reason for this study.

Ubuntu

Ubuntu is an old African term for “humanness”—for caring and for sharing. It is a way of life and stresses the importance of community, solidarity, sharing and caring. As an ideal, Ubuntu means the opposite of being selfish and self-centred. It promotes cooperation between individuals, cultures and nations. Ubuntu thus empowers all to be valued to reach their full potential in accord with all around them. (Nzimakwe 2014, 1)

Mugumbate and Nyanguru (2013, 2) concur that Ubuntu “is a form of humanism which can be expressed in the phrase ‘I am because of who we all are’.” The word originates from the Nguni and Bantu languages of Africa. Ubuntu is also included in the Zulu saying “Umuntu Ngumuntu Ngabantu.” The affirmation that “I am because we are and I am human because I belong, express this tenet” (Mugumbate and Nyanguru 2013, 4). It embraces an understanding that we are all linked and that we progress through the progress of others. It is about our connection as humans and how our actions have a bearing on others and on society (Williams 2018).

In the Ubuntu philosophy, a group’s gain holds more importance than that of an individual. “All efforts working towards this common good are lauded and encouraged, as are all acts of kindness, compassion and care, and the great need for human dignity, self-respect and integrity” (Boon 1996, 32).

From the above, one can conclude that the African way of thinking is informed by the needs of the group over the needs of an individual, while the Western philosophies would be more individualistic in nature. In African culture, a person is part of a community before that person is an individual. All are equal and all need one another. All have the right to respect and dignity and harm to one means harm to all.

Ubuntu is about service and contribution. It aims to help humanity where help is needed. The underlying belief is that we are all connected; bound to others. We can contribute to humanity and to society by easing the burdens of others. “A human being can only be a human being through other human beings because people live through the help of others” (Nzimakwe 2014, 4).

Mugumbate and Nyanguru (2013, 2–12) contend that Ubuntu is about establishing bonds with others. One is considered human through accepting and respecting the humanity of others’ humanity and vice versa. This means that as a community, we should care for the welfare of others and support one another. We should recognise and accept one another’s rights and take responsibility for others as individuals and as a community. Challenges of hunger and poverty can be addressed if the people in a community care for the well-being of others (Khomba 2011, 4).

Ubuntu in the Workplace

The philosophy of Ubuntu can play an important role in a work environment. When employees are treated like humans and not like robots, when their socio-cultural values

are respected, and when they are listened to, they are more productive (Khomba 2011). As team members caring for each other, employees are more understanding of the humanity of others. They can cooperate and support each other as members of one family in achieving common goals.

Fellow workers can establish respectful relationships with one another where knowledge and experience are shared for mutual development (Nzimakwe 2014, 9). In the Ubuntu approach, individualism is not favoured. Community solidarity cannot be built at the expense of others. There has to be respect for the rights and needs of others. “Ubuntu philosophy also implies that if people are treated well, they are likely to perform better” (Khomba 2011, 17). Browning (2006 cited in Molose et al. 2018, 8) found in her study that front-line employees of retail car companies and hospitality organisations in South Africa held the development of relationships, personal communication and respect in high regard. These beliefs are similar to the concept of camaraderie in Ubuntu.

Nzimakwe (2014, 38) states that gaining knowledge from others by listening to them is important in Ubuntu philosophy. He presents the idea of value-based leadership in the creation of an atmosphere that encourages positive values in a team. A value-based culture promotes equal opportunities, mutual support, a sense of belonging and trust among all members of the team. Molose et al. (2018, 8) argue that Ubuntu “has the potential to overcome challenges that hinder multi-national team productivity and performance because it enables team members to tolerate each other’s cultural differences that might otherwise result in low service delivery performance.”

The people-centric Ubuntu philosophy supports engagement within a community and is in line with companies showing responsibility to the societies they work in. Collaborating with the communities and caring for their concerns will have a sustainable impact on the communities as well as their own operations. Embracing Ubuntu also means that environmental concerns will be taken into account, since the natural environment is vital for human survival and growth. Caring for people would include caring for their surroundings (Khomba 2011, 19).

In conclusion, the concepts of social responsibility, mentoring and Ubuntu are not disparate. These terms are highly comparable. Showing Ubuntu in an organisation would be showing responsibility for others around you. Practising Ubuntu would mean that you care for the interests and development of others. Engineers practising social responsibility would also think of ways to ensure the safety and well-being of others. Engineers engaging with communities and collaborating with one another are following Ubuntu philosophy. Social responsibility and Ubuntu have similar values and motives. Therefore, engineers practising social responsibility are actually practising Ubuntu. By sacrificing their personal interests, they are contributing to the greater good of their societies and humanity.

Methodology

The study which directed this article was a case study of South African engineering professionals. Both positivist and interpretive approaches were used. A positivist approach is related to quantitative data collection, while an interpretive approach lends itself to qualitative data collection.

This study collected data from 50 engineering professionals working in diverse fields and different cities in South Africa. Two methods of sampling were used; simple random sampling and snowball sampling. The engineering professionals with varying degrees of experience and qualification were requested to complete a questionnaire with both closed and open-ended questions.

The objectives of the study were to determine the availability of mentoring in their workplace, their understanding of Ubuntu and whether Ubuntu can contribute to improving mentor-mentee relationships within their work setting. In addition, they were asked about the manifestation of Ubuntu in their workplace.

The data were collected after the necessary ethics clearance from the central ethics committee at the author's educational institution. Qualitative data were analysed through frequency tables, while qualitative data were thematically analysed. Both inductive coding and deductive coding were used.

Data presentation

Quantitative Data

Table 1: Engineers, mentoring and Ubuntu

	Question	Agree	Disagree	Unsure
1	Do you think that engineering professionals should know their roles as active and morally responsible citizens?	98	2	0
2	When you entered professional life, did you feel the need for mentoring?	96	0	4
3	Was mentorship available to you?	22	78	0
4	Did you feel accepted into the company's culture?	17	80	3
5	Do you think Ubuntu can improve mentor-mentee relationships?	84	2	14
6	South African engineers should practise the value of Ubuntu.	82	0	18

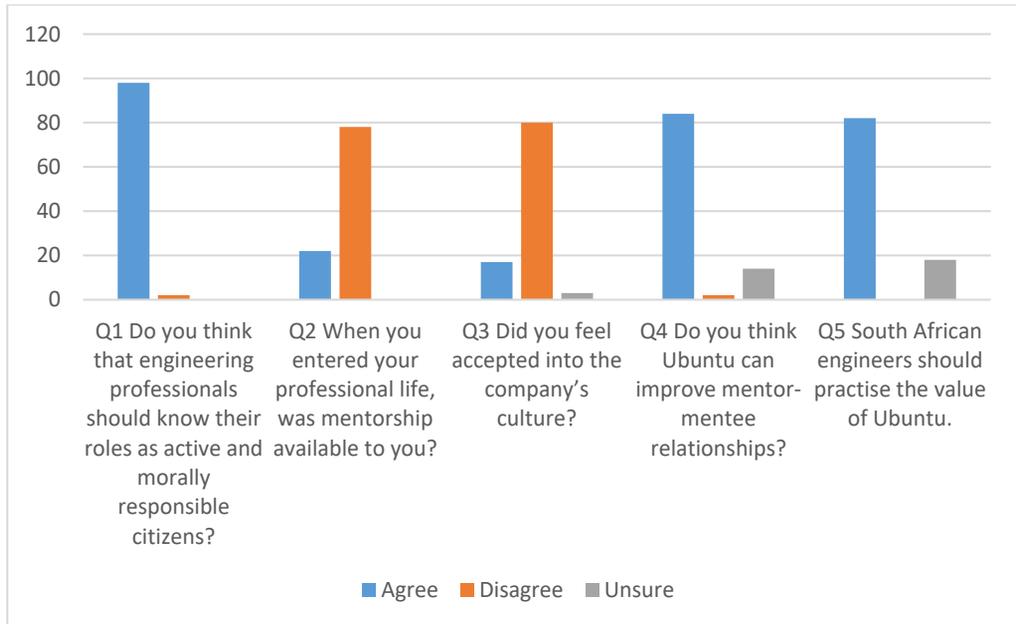


Figure 1: Engineers, mentoring and Ubuntu

Qualitative data

Table 2: Understanding of Ubuntu

Q7	Explain your understanding of Ubuntu
1	Taking care of the second person as you do for yourself. One needs to show empathy for others to be human in a true sense (EP#50).
2	A helping hand toward community for the better good “we are who we are because of what we all are” (EP#43).
3	Societal and community fabric that connects all humanity (EP#48).
4	Engineering as a profession needs people who look out for one another and help others (EP#27).
5	Respect given is respect earned! Improvement is a collective effort (EP#44). Always respect other people (EP#23, EP#32, EP#16).
6	Working in an environment where everyone’s opinion is valued and each person is respectful (EP#35).
7	I believe it falls under morality and that we need to be concerned with the good of our fellow man (EP#36).
8	Ubuntu means treating everyone with dignity and respect regardless of their colour, age, religion and ethnic group (EP#39).
9	More about sharing and understanding. Respect each other to develop each other in that process (EP#11).

Table 3: Examples of Ubuntu in the engineering workplace

Q8	Give two examples of how engineers can practise Ubuntu in the workplace
1	Knowledge sharing—Mentoring (EP#1, EP#46, EP#39, EP#10, EP#17).
2	Build design equipment for the disabled. Assist schools with developments, teaching and learning fixtures (EP#43).
3	Sharing information that contributes to career growth and collective problem-solving. Respect other people’s input to any project at hand, without questioning their intelligence but working together to improve on their input (EP#38).
4	Make technical decisions with the community in mind, e.g., lower energy consumption, off-grid power for rural environments (EP#46).
5	Apply their knowledge and skill in the interest of the public. Do not prejudice health and safety (EP#48).
6	Supporting team members to ensure tasks are completed effectively. Open communication between team members (EP#35).
7	First of all, equalise human rights. Take away discrimination in the workplace. Give to less fortunate people (EP#10).
8	Being aware of how we can assist or provide advice to others who need it. Keep co-worker and client identities as individuals in mind when dealing with them (EP#36)
9	Listen to people and relate to them, their circumstances and their surroundings. Understanding and respecting other people’s cultures and background (EP#15).

Table 4: Ways to improve Ubuntu in the engineering workplace

Q9	What would you do to improve Ubuntu in the workplace?
1	Include quiet people in discussions during meetings. Offer assistance before a person asks for help (EP#35).
2	Team-building exercises with various people from different backgrounds sharing their stories (EP#30, EP#15, EP#9, EP#14, EP#15).
3	Assist design of a project for free. Open door policy to staff (EP#43)
4	Treat co-workers with respect (EP#32).
5	Have colleagues educated about the core values of Ubuntu and its benefits (we all need each other to keep operations running at work) (EP#38).
6	The best ideas often come from the floor and you, as the engineer, have the skills to recognise and implement them. (EP#44).
7	Have regular communicate on progress. Have more cultural workshops where each one enlightens the others of his or her culture. (EP#47).
8	Respect the interests of the public. Mentor young engineers about Ubuntu (EP#48).
9	Give others a chance and opportunity to perform properly to their capability. Promote togetherness and create an environment that allows everyone to perform to their capability and also assist them in achieving this. (EP#12).

Discussion

Responses to the quantitative questions 1–6 in table 1 show that even though the participants felt the need for mentoring while entering their professional lives, most of them did not have mentorship available to them. They agree that Ubuntu can improve the mentor-mentee relationship. Furthermore, they are in favour of engineers practising Ubuntu in their workplace.

Responses to the seventh question (Explain your understanding of Ubuntu) show that the participating engineering professionals understand that Ubuntu is about humanity, respect and care for others. We are one as humanity and need to treat everyone with the same care and work together for good. Understanding and respecting other people's cultures and background is a common theme in the responses. Looking past the differences and respecting the rights of others is considered important.

Responses to the eighth question (Give two examples of how engineers can practise Ubuntu in the workplace) are predominantly about mentoring and sharing information, building others, respecting their rights and giving them the opportunity to reach their potential. These responses also include the responsibility of engineers towards the community and the disadvantaged, and that the engineers should be cognisant of the community's good and volunteer their services for projects to help those who could benefit from their knowledge and skills. This is in keeping with the value of Ubuntu and mentoring as discussed above. Another important aspect revealed in the data is about the engineering professionals asking for no discrimination in the workplace as an expression of practising Ubuntu. This could mean that discrimination is a challenge they are facing.

The responses to the last question (What would you do to improve Ubuntu in the workplace?) reflect the importance of communicating with one another, engaging in team building exercises, letting the silent express themselves, valuing the opinions of others and learning about their cultures. The focus is on showing empathy and being sociable, connecting with people, getting to know them better and building relationships. It is about sharing information that contributes to career growth and collective problem-solving. All these are manifestations of social responsibilities through the practice of Ubuntu, through caring for others, through showing humanity by recognising the humanity of others.

Conclusion

Engineering is interwoven with every facet of society. Engineering skills and knowledge can be put to immense good for the benefit of the society that engineers are a part of. When engineers give back to the community, it benefits the society and is of value to the engineers themselves as well (Sprinkle 2018).

The study collected data from engineering professionals working in different fields across South Africa to determine whether mentorship was available to them when they needed it. Most of them disagreed. They agreed that engineers should practise Ubuntu in the workplace and that by practising Ubuntu, mentor-mentee relationships can be improved. They talked about what Ubuntu means to them and how it can be practised in their profession. The data revealed that they understood the concept of Ubuntu and how it can be made a part of their workplace. For the participating engineers, Ubuntu equates respect, connectedness, letting all contribute, giving recognition, helping others achieve their full potential, sharing knowledge, and one humanity. For them the promotion of Ubuntu means team-building exercises, listening, sharing, encouraging dialogue, challenging perceptions and taking away discrimination.

Ubuntu is important for the engineering profession, especially because young engineers require mentoring from the more experienced ones to progress to a higher level of professional and personal competence. Moreover, accepting others as part of the same humanity is essential in a multicultural society like South Africa. Our fractured past requires a special effort in seeing each other as human first, beyond the racial labelling inherited from apartheid.

Ubuntu is the realisation that you alone will never be able to “construct a building”; you need other people. It is acknowledging and appreciating other people’s input. Engineering professionals practising Ubuntu are able to see the connectedness of all intentions, actions and effects. They can challenge perceptions about diversity and encourage dialogue among themselves and the community. They consider the well-being and needs of their communities while problem-solving collectively. Engineering is, by its very nature, a people-serving profession and practising Ubuntu is in keeping with the essence of the engineering profession.

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