



# **The evaluation of an interpersonal development programme for interns at a tertiary education institution**

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Mini-dissertation submitted in partial fulfilment of the requirements for the degree *Masters of Commerce in Industrial Psychology* at the North West University

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## COMMENTS

The reader is reminded of the following:

- The American Psychological Association (APA) reference and editorial format, which is prescribed by the publication manual (6<sup>th</sup> edition), was use in this dissertation. This practice is in line with the policy of the Industrial Psychology programme of the North-West University (Potchefstroom) to use the APA guidelines and writing style in all scientific documents as from January 1999.
- The mini-dissertation is submitted in the form of a research article (chapter 2), with chapters 1 and 3 being the introduction and conclusion of the study. The editorial style specified by the South African Journal of Industrial Psychology (which agrees largely with the APA style) is used, but the APA guidelines were followed in constructing tables.

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- A special thanks to Marnie for always checking up on me and making sure I am okay.

## **DECLARATION**

I, Simoné den Ouden, hereby declare that this mini-dissertation entitled “The evaluation of an interpersonal development programme for interns at a tertiary education institution”, is my own work and that the views and opinions expressed in this work are those of the author and relevant literature references as shown in the references.

**I further declare that the content of this research will not be handed in for any other qualification at any other tertiary institution.**

A handwritten signature in black ink that reads "den Ouden". The letters are cursive and somewhat stylized, with the 'd' and 'n' being particularly prominent.

Simoné den Ouden

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14 Nov 2018

TO WHOM IT MAY CONCERN:

I hereby confirm that the MCom dissertation *The evaluation of an interpersonal development programme for interns at a tertiary education institution* by Ms Simone den Ouden (student no: 22746005) was edited and groomed to the best of my ability. The processing included recommendations to improve the language and logical structure, guide the line of argument as well as to enhance the presentation. I am satisfied that, provided my changes to the text and my recommendations are implemented, the language would be of a standard fit for publication.

Rev Claude Vosloo

Language and knowledge practitioner and consultant

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*Don't think outside the box, reinvent the box*

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## SUMMARY

**Title:** The evaluation of an interpersonal development programme for interns at a tertiary education institution

**Key words:** Higher education institutions, emotional awareness, intrapersonal skills, interpersonal skills, interpersonal development, interns, service-learning

Higher education institutions deliver large numbers of graduates annually prepared to enter the workforce. Unfortunately, unemployment remains a harsh reality in South Africa, affecting these graduates. The National Research Foundation launched an internship programme running over 12 months, providing graduates the opportunity to gain experience. Research have found that even though university courses cover a wide range of technical skills and knowledge, graduates still lack several essential skills. These missing skills include communication, teamwork, conflict management, or emotional awareness, and is generally referred to as interpersonal- or ‘soft’ skills. The present study implemented and evaluated a programme to develop interpersonal skills for interns studying science, engineering, and technology at a tertiary education institute.

The general objective of the study was to implement and evaluate the programme to develop interns’ interpersonal skills. A qualitative research approach was followed with social constructivism and phenomenology as philosophical underpinnings. A case study design was used while purposive sampling was employed to ensure a homogenous sample. The sample consisted of National Research Foundation interns (N=10) in the field of science, engineering, and technology at a tertiary education institution.

The results showed that participants experienced the development programme as useful and empowering. The programme raised participants’ self-awareness and enabled them to solve problems they encountered. Participants developed a sense of maturity and self-confidence which help them deal with difficult and uncomfortable situations. Overall, the participants experienced the development programme as positive. Valuable recommendations were made, by both researcher and participants, for future development initiatives.

## OPSOMMING

**Onderwerp:** Die evaluering van 'n interpersoonlike ontwikkelingsplan vir interns aan 'n tersiêre onderwysinrigting

**Sleutelwoorde:** Hoëronderwysinstellings, emosionele bewustheid, intrapersoonlike vaardighede, interpersoonlike vaardighede, interpersoonlike ontwikkeling, interns, diensleer

Jaarliks lewer hoëronderwysinstellings groot getalle gegradueerdes, gereed om die arbeidsmark te betree. Ongelukkig bly hoë werkloosheidsyfers steeds 'n harde werklikheid in Suid-Afrika en raak hierdie gegradueerdes. Die Nasionale Navorsingstigting het 'n 12-maande-lange internskap geloods wat gegradueerdes die geleentheid bied om praktiese ervaring op te doen. Navorsing het bewys dat hoewel universiteitskursusse 'n wye verskeidenheid tegniese vaardighede aanbied, gegradueerdes steeds kernvaardighede kortkom. Hierdie ontbrekende vaardighede sluit in; kommunikasie, spanwerk, konflikhantering of emosionele bewustheid, waarna algemeen as interpersoonlike of “sagte” vaardighede verwys word. Die huidige studie het 'n program geïmplementeer om interpersoonlike vaardighede te ontwikkel en die impak daarvan geëvalueer onder interns wat studeer in wetenskap, ingenieurswese en tegnologie aan 'n tersiêre onderwysinstelling.

Die hoofdoelstelling van die studie was die evaluering van hierdie program om interpersoonlike vaardighede by interns te ontwikkel. 'n Kwalitatiewe navorsingsbenadering is gevolg met sosiale konstruktivisme en fenomenologie as filosofiese onderbou. Tydens die studie is 'n gevallestudie gebruik terwyl doelgerigte steekproefnemings gedoen is om 'n homogene steekproef te verseker. Die steekproefgroep (N=10) het bestaan uit interns van die Nasionale Navorsingstigting wat aan 'n tersiêre onderwysinrigting studeer binne die veld van wetenskap, ingenieurswese en tegnologie.

Die resultate het getoon dat deelnemers die program nuttig en bemagtigend vind. Gedurende die program is verskeie deelnemers se selfbewustheid verhoog en het hulle in staat gevoel om probleme op te los. Deelnemers het ook 'n gevoel van volwassenheid en selfvertroue ontwikkel wat hulle toegerus het om moeilike en ongemaklike situasies te hanteer. Die algehele ervaring van

die interpersoonlike ontwikkelingsprogram was positief. Waardevolle aanbevelings is deur beide navorser en deelnemers gemaak met die oog op inisiatiewe vir toekomstige ontwikkeling.

# CHAPTER 1

# **1. INTRODUCTION**

This mini-dissertation focuses on the evaluation of an interpersonal development programme for National Research Foundation (NRF) interns at a tertiary education institution. The first chapter includes the problem statement and discussion of research objectives, research design is explained together with the division of chapters.

## **1.1. Problem statement**

The term “unemployment” is not new to South Africans and it is unlikely that the problem will be solved in the near future (Peyper, 2017). Fortunately, organisations such as the National Research Foundation (NRF) took it upon them to provide service-learning internships for 12 months at different organisations, higher education institutes, and government agencies (NRF, 2018). The main aim of such internship is to provide graduates with work experience that would equip them better for the job market (NRF, 2017). Unfortunately, a number of interns still find it difficult to obtain permanent employment after their internship year.

Employability is a broad term referring to a set of skills that employees require to obtain employment successfully (Belwal, Priyadarshi & Al Fazari, 2017). This mentioned set of skills include more than the ordinary job-relevant ones, and refer to individuals’ attitude, personality, and transferable soft skills (Belwal et al., 2017; Bhatnagar & Agarwala, 2017). There are various classic soft skills such as reliability, professionalism, willingness to learn, taking responsibility, and coping with uncertainty. Such skills include: the ability to interact and communicate with others, self-confidence, written and verbal communication, and time management (Belwal et al., 2017). It is evident that soft skills have both an interpersonal and intrapersonal application. It is often found that graduates struggle to fulfil their new positions once appointed as their interpersonal skills are below employer’s expectation which ultimately limit organisational growth and development (Truong, Laura & Shaw, 2018). Organisations has to deal with the consequences of the lack of interpersonal skills as it impacts new employees’ interaction with customers, professionalism and functionality of teams (Groh, Krishnan, McKenzie & Vishwanath, 2016).

Intrapersonal skills provide self-control, resilience, and self-management (Ratten & Hodge, 2016). Such skills deal with thoughts, feelings, and emotions which individuals experience (Vijayalakshmi, 2016). Examples of intrapersonal skills are: self-awareness, self-development, accountability, self-regulation and leadership (Geisinger, 2016).

According to Haq (2011) interpersonal skills can be defined as "... knowledge about human behavior and group processes, ability to understand the feelings, attitudes and intentions of others, and ability to clearly and credibly correspond" (p. 2794). Such skills entail the following abilities: implement self-discipline, manage oneself, interact with others, deal with conflict, and show emotional intelligence (Geisinger, 2016; Laker & Powell, 2011; Vijayalakshmi, 2016). According to Lievens and Sackett (2012), such skills can be linked to relationship building, social sensitivity, communication, listening, and teamwork.

Inter- and intrapersonal skills can be acquired and developed through a programme of personal development. This form of development implies a journey where individuals discover themselves, their strengths, values and attitudes as well as develop self-esteem, self-confidence, and self-awareness (Kruckeberg, Amann & Green, 2011; Masters & Wallace, 2011). Personal development does not occur by coincidence, but rather entails effective, deliberate, and enjoyable actions (Kruckeberg et al., 2011).

The aim of the present study was to evaluate an existing programme for interpersonal development as aid for NRF interns studying science, engineering, and technology at a tertiary education institution. Each of these students are given the opportunity to grow and develop as a person. This creates the possibility that these students would not only be equipped with vital skills. During the service-learning process as interns they would also obtain valuable work experience, which could differentiate them from other candidates in their future work environment. The statement above led to the specific research questions, which are presented below.

The main research questions were formulated as follows:

1. How is an interpersonal development programme for science, engineering, and technology interns conceptualised within the literature?
2. What is the content and methodology of an interpersonal development programme for a specific population of interns at a tertiary institution?
3. What was the experience of the population after the interpersonal development programme?
4. What recommendations can be made for future research?

## **1.2. EXPECTED CONTRIBUTION OF THE STUDY**

### **1.2.1 Contribution to the field of Industrial Psychology**

The present study evaluated an interpersonal development programme for NRF interns in science, engineering, and technology, at a tertiary education institution. This evaluation could add new knowledge to the field of Industrial Psychology. This research study aimed to provide insight into programmes tailored for interns in science, engineering, and technology while assessing how the knowledge contributed to their growth. Such a research study would also raise awareness and highlight the need for personal development programmes for students from science, engineering and technology.

### **1.2.2 Contribution to the organisation**

The interns used in this study developed advanced interpersonal and intrapersonal skills, which improved their overall performance. Furthermore, the organisation had access to potential employees with exceptional skills who were already familiar with the organisation and ready to work.

### **1.2.3 Contribution to the individual**

Science, engineering, and technology interns had the opportunity to attend an interpersonal development programme. They gained insight into their interpersonal and intrapersonal skills, strengths, and growth areas. These interns developed a high level of self-awareness and a mind-set of continuous learning was cultivated.

## **1.3. RESEARCH OBJECTIVES**

The research objectives for the study were divided into a general objective, which was broken down into specific objectives.

### **1.3.1 General objective**

The general objective of this research was to evaluate an interpersonal development programme for NRF interns who participate in science, engineering, or technology at a South African tertiary education institution.

### **1.3.2 Specific objectives**

Flowing from the general objective, the specific objectives were as formulated as follows:

- Explore how an interpersonal development programme for science, engineering and technology interns is conceptualised within the literature.
- Investigate what the content and methodology of an interpersonal development programme entail for a specific population of interns at a tertiary institution.
- Determine the experience of the population after the interpersonal development programme.
- Draw conclusions and make recommendations for future research in the field.

## **1.4. RESEARCH DESIGN**

### **1.4.1. Research approach**

For the purpose of the present study, a qualitative research approach was utilised. Qualitative research is challenging to define, and several research methods are linked to a qualitative design (Struwig & Stead, 2001). Creswell (1998) defines qualitative research as “A process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyses words, reports as well as detailed views of informants, and conducts the study in a natural setting” (p. 15).

Key research activities include listening, observing, contextualising, and recording people’s thoughts, reflections, actions and experiences of their “real world”, and interpreting it (Henwood, 2014).

Social constructivism and phenomenology were utilised as theoretical foundation for the study. In social constructivism, participants are involved, committed and active during the research process. Individuals are not only viewed as a means-to-an-end, but rather become like partners. Social constructivism focuses on participants’ journey to make sense of the world in which they work and live (De Vos, Strydom, Schulze & Patel, 2013). Furthermore, the phenomenological method entails investigating a central concept which the participants are experiencing (Creswell, 1998). Such an approach seeks to understand social experiences from the individual’s own perspective while investigating how the world is experienced (Taylor, Bogdan & DeVault, 2016). Taylor et al. add that “... the important reality is what people perceive it to be” (p. 3).

### **1.4.2. Research strategy**

The strategy of a case study entails an intensive systematic examination of a certain phenomenon, cases or situations over a period where in-depth data and information is obtained (Cronin, 2014; Struwig & Stead, 2001). A case study provides various sources of information such as reports, documents, interviews, observations and audio-visual material (Creswell, 1998). Where a case study is employed to explain phenomena, it is referred to as an instrumental case study. The latter will also be used for the present research study (Fouché & Schurink, 2013). The phenomenon that

was investigated during this research study was NRF interns at a tertiary education institution and their evaluation of an interpersonal development programme.

A pilot study provides the researcher the opportunity to concentrate on particular issues or areas that were unclear in the past, or to examine specific questions (Maxwell, 2013; Strydom & Delpont, 2013). Exploratory research's main purpose is clarifying and developing ideas and formulating hypotheses and questions that may need a more detailed investigation at a later stage (Struwig & Stead, 2001). A pilot study allows the researcher to make certain modifications, which is ideal when implementing an interpersonal development plan in cases where needs may differ between groups.

### **1.4.3. Literature review**

A comprehensive literature review was conducted on topics such as interpersonal development, emotional awareness, interpersonal skills, intrapersonal skills, service-learning, and interns. The sources that were consulted were:

- Academic Search Premier;
- Ebscohost;
- Emerald Insight Journals;
- Google Scholar;
- Google;
- NWU Library book collection;
- SAePublications;
- Science Direct; and
- South African Journal of Industrial Psychology.

References from 2010 to 2018 were used, with the use of older references as an exception.

#### **1.4.4. Research setting**

The study was conducted at a tertiary institution and data were collected amongst interns in the field(s) of science, technology, and engineering. An interpersonal development plan, developed by the main supervisor, was adapted and implemented. The adaption of the programme included updating the programme with the latest literature and tailoring the programme according to the needs and specifications of the interns participating in science, engineering, and technology.

The development programme included various seminars that were designed specifically to develop inter- and intrapersonal skills. Each month's session focused on a different topic and skill. The seminar series varied in terms of methodology, time, format, and location.

The methods employed during the development programme were short seminars, administering questionnaires, scenarios, self-read-and-do, one-on-one personalised feedback sessions, and role-plays. Most sessions were scheduled for 3 hours, but some ended earlier as well. One-on-one feedback sessions ranged from 30 to 60 minutes. Group discussions and scenarios, which required group discussions, took longer than self-read-and-do.

Careful consideration was given to the venue and its set-up. The venue was separate from any of the participants' offices or working environments. The researcher ensured the venue was well ventilated, appropriately lighted and contained comfortable furniture.

#### **1.4.5. Entrée and establishing researcher roles**

Access to the sample was gained through the co-supervisor who was involved with another research project involving the interns. All the participants were contacted face to face and telephonically to explain the study and its process. The mentors of the interns were also contacted to explain the importance to encourage participation.

The researcher had to inform interns that participation is voluntary, what the purpose of the study was, how confidentiality would be protected and which risks are associated with participation (Creswell, 1998).

The researcher had to fulfil a number of roles during the research study. It was the researcher's responsibility to refrain from judgement and remain objective during the research process. The researcher had to ensure that both participants and facilitators respected each other's views and opinions (Strydom, 2011). Expectations of all parties involved had to be managed and all necessary arrangements had to be in place in order for the programme and sessions to proceed without problems.

#### **1.4.6. Sampling**

Purposive qualitative sampling was chosen for the present study, more specifically homogeneous sampling. This form of sampling is typically employed to describe a particular issue or situation, which individuals with similar backgrounds experience (Struwig & Stead, 2001). This sampling method was used since all participants were interns working for the National Research Foundation (NRF) in the field(s) of science, engineering, and technology. The NRF internship represents the situation that all participants were exposed to.

#### **1.4.7. Data collection methods**

The data for the research project were collected through focus group discussions. Focus groups enable researchers to generate concentrated amounts of data on a specific topic of interest (Greeff, 2013). A focus group is a carefully planned discussion that is designed to gain insight into an individual's perceptions, in a non-invasive manner (Struwig & Stead, 2001). It is crucial that the person facilitating the focus group is skilled to do so. For the present study, data were collected before the interpersonal development programme began, as well as after the last session.

Prior to presenting the interpersonal development programme, a focus group was held with the participants. During the session, the following questions were posed to ascertain how participants perceive of the topic of the study:

1. What do you regard as interpersonal skills development?
2. Which interpersonal development areas do you identify in yourself?
3. In which ways would you like to see the development needs addressed?
4. How do you think you could utilise interpersonal skills in your profession?

Questions posed during the focus group after presenting the interpersonal development programme:

1. What do you regard as interpersonal skills development?
2. What was your experiences of the interpersonal development programme?
3. What was your experience of the content of the interpersonal development programme?
4. What was your experience of the method of presentation of the interpersonal development programme?
5. Do you regard the programme as effective in addressing your development needs as discussed during the first focus group?
6. How do you think you could utilise interpersonal skills in your profession?
7. What recommendations do you have to enhance the quality of the content of the programme?
8. Do you have any other recommendations/comments?

#### **1.4.8. Recording of data**

The researcher obtained informed consent from participants to record the discussions. The focus group session was recorded electronically with a voice recorder and transcribed to form a document. While the discussion took place, the facilitator made field notes including remarks on body language and facial expressions.

#### **1.4.9. Data analysis**

The approach of Creswell's analytical spiral was followed to analyse the research data. This approach consists of nine steps and should rather be used as a guideline where steps may overlap (Schurink, Fouché & De Vos, 2013). These nine steps, as described by Schurink et al. (2013), were applied to the present study:

1. *Planning for recording of data:* the researcher planned systematically how data would be recorded, with the approach suitable for participants and the setting.
2. *Data collection and preliminary analysis:* this step consisted of two aspects: firstly, the data were analysed when collecting it at the research site. Secondly, analysis took place after the data were collected and the research completed. It was crucial that the researcher maintain a balance between the two aspects to ensure data rich conclusions were made.

3. *Managing/organising data*: the first analysis of the data took place away from the research site. A list was made indicating the diverse types of data.
4. *Reading and writing memos*: writing memos and notes enabled the researcher to explore the database in more detail. Memos included brief ideas, phrases or key concepts that occurred to the researcher.
5. *Generating categories, themes and patterns*: this step represents the heart of qualitative research. The process requires sensitive awareness of the data, thus, the researcher had to pay focused attention to the data and be open to subtle connotations of social life.
6. *Coding the data*: the researcher applied a coding scheme to the identified themes and categories.
7. *Testing emergent understandings*: the researcher examined the data and challenged her understanding of this information; thereafter she investigated the data to identify possible negative patterns, which she integrated into larger constructs when necessary.
8. *Searching for alternative explanations*: even though patterns and categories have been identified the researcher still needed to challenge critically the patterns that seemed apparent. The research had to remain open-minded and keep alternative explanations in mind.
9. *Writing the report*: this action forms part of the final step of the spiral. A report is used to summarise and reflect the complexity of the raw data gathered. For the present research study, the report was presented in the form of a dissertation.

#### **1.4.10. Strategies to ensure quality data**

Strategies employed to ensure quality data focused on credibility, transferability, dependability, and confirmability (Mohlala, Goldman & Goosen, 2012; Visagie & Koekemoer, 2014), which are explained briefly below.

*Credibility*: entails the extent to which the research findings are congruent with reality. This include the utilisation of established research methods, a design that suits the research questions, and a theoretical foundation that aligns the research methods with the posed questions (Nieuwenhuis, 2016).

*Transferability*: negates the idea of generalisation and invites readers to connect the constructs in the study with their own experiences. Transferability of a research study can be increased through a thick (detail-rich) description and purposive sampling (Nieuwenhuis, 2016).

*Dependability*: can also be described in terms of the research data's reliability. For Nieuwenhuis (2016), dependability can be demonstrated through the "research design and its implementation; the operational detail of data gathering and the reflective appraisal of the project" (p. 124).

*Confirmability*: entails the extent to which the findings of the research study are not shaped by the researcher's own interest, motivation, and bias; rather by the participants' experience (Nieuwenhuis, 2016).

#### **1.4.11. Reporting**

Reporting was done through qualitative writing in an essay format. Headings and subheadings were determined by themes identified through data analysis. The researcher had to remain objective when reporting the findings of the research study.

#### **1.4.12. Ethical considerations**

This research study formed part of an existing project that operated under the ethics number *NWU00084-10-S4*. When dealing with people, certain ethical considerations must be taken into account.

Ethics for focus groups include facilitator skills to monitor and determine discomfort levels and the availability of referral support services during sessions (Carey & Asbury, 2012). For the present study, the researcher's primary ethical obligation was to the participants involved in the study. Thus, their perspectives on risks and benefits had to be considered (Carey & Asbury, 2012).

When focus groups are used as method to collect data, it presents a unique challenge for maintaining confidentiality. Therefore, it was crucial that the researcher emphasised to the participants that only partial confidentiality could be ensured; the researcher would keep information confidential but could not accept responsibility for statements on behalf of other

participants (Carey & Asbury, 2012). The researcher also elucidated the process and stressed that participants could withdraw at any time during the study should they feel uncomfortable. During transcription, the identifiable information was removed by the researcher to ensure anonymity (Carey & Asbury, 2012).

## **1.5 CHAPTER DIVISION**

The chapters for the dissertation are outlined as follows:

Chapter 1: Introduction;

Chapter 2: Research article;

Chapter 3: Conclusions, limitations and recommendations.

## **1.6. CHAPTER SUMMARY**

Chapter 1 introduced the present study. This included the problem statement, research questions, expected contribution of the study, and research objectives. The research design employed in this research was explained thoroughly, followed by a brief overview of the chapters.

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## **CHAPTER 2**

### **RESEARCH ARTICLE**

## **The evaluation of an interpersonal development programme for interns at a tertiary education institution**

**Orientation:** Internships provide graduates the opportunity to gain experience in order to better equip them for the workplace. Even though an internship improves technical skills and knowledge, there seems to be a still lack of interpersonal skills.

**Research purpose:** The general aim of this study was to evaluate an interpersonal development programme for interns at a tertiary education institution.

**Motivation for the study:** This study was motivated by foregoing research, employers' perspectives and known experiences of interns in the workplace.

**Research design, approach and method:** A qualitative research design was utilised with purposive sampling which provided a sample of 10 participants. A focus group was conducted before the implementation of the interpersonal development programme. The interpersonal development programme was presented through a number of consecutive sessions where different topics were covered. A second focus group was conducted after the interpersonal development programme to determine the impact.

**Main findings:** The results indicated that participants did not have a good frame of reference what interpersonal skills are and how it impact their workplace. They experienced the interpersonal development programme as positive, empowering and useful. It enabled participants to improve their self-awareness and self-confidence. They were more comfortable approaching uncomfortable situations and solving problems.

**Practical implications:** An interpersonal development programme is a simple, straightforward and valuable instrument to address the skill gap with graduates. Participants who take responsibility for their own development gain more from development initiatives.

**Contribution/value add:** This research study provided interns with a set of interpersonal skills that will distinguish them from others in their future workplace. Participants were offered the opportunity to take time out of their schedules to invest in themselves. This study also offers a frame of reference for organisations who want to implement similar programmes.

**Key words:** Higher education institutes, emotional awareness, intrapersonal skills, interpersonal skills, interpersonal development, interns, service-learning.

## **Introduction**

Approximately 191 524 students graduate from higher education institutions (HEIs) annually in South Africa (Higher Education and Training, 2017). University programmes cover a wide range of knowledge and theories during undergraduate courses. Nevertheless, a few critical success factors are still identified as lacking in the students' skills pool when they enter the world of work (Butler, 2012; Senay 2015). These lacking success factors include interpersonal skills, leadership skills, communication, self-confidence, emotional stability, and critical thinking (Blom & Saeki, 2011).

A way in which success factors can be incorporated into the skillset of graduates is by enrolling as interns into a service-learning programme. Service learning can be described from different angles: the process of incorporating intention and action; practical and real-world experiences that mutually benefit all parties involved; or as a method of teaching combined with community service, while concentrating on critical thinking and reflection (Lawrence & Butler, 2010). West (2012) found that graduates in science, technology, and engineering find it difficult to master skills such as communication and teamwork. According to So and Lam (2015), science and technology students must show personal transferable skills such as problem solving, communication, and ability to work in a team.

These skills will assist graduates to adapt to their new working environments and ensure they add value to the organisation. Due to increased competition and rapid changes in the world of work employees are expected to capitalise on their soft skills and adapt accordingly to ensure organisations remain relevant (Musa, Mufti, Latiff & Amin, 2012). Organisations argue that graduates who lack interpersonal skills find it challenging to contribute effectively and integrate themselves into the organisation (Murti, 2014).

A programme to enhance interpersonal development would typically include training in interpersonal skills such as attending, listening, communication, and exploring. This will help interns understand others and strengthen interpersonal relations (Bhana, 2014; Susanti, 2011). Such a programme should include further intrapersonal skills such as empathy, self-awareness, self-control, and emotional awareness (Hemanth & Fisher, 2015; National Research Council,

2011; Susanti, 2011). Insights into personal and interpersonal emotional awareness can be enriched by designing a service-learning programme with a facet that focuses on increasing emotional awareness (Manring, 2012). It can thus be suggested that a personal development programme covering inter- and intrapersonal skills will address some of the above-mentioned critical skills, which is necessary for graduates in a service-learning programme within the science, technology and engineering sector.

Personal development can be defined as efforts of an individual to enhance skills or knowledge by focusing on future roles and occupations (Aguinis & Kraiger, 2009; Cottrell, 2015). According to Beusaert, Segers and Gijsselaers (2011a), a development programme can be used as a strategic development tool to stimulate individuals' learning whether it is informal learning such as receiving feedback, reading a book, or formal learning such as training. In this regard, development must be understood as an open-ended, complex, career-long and lifelong process where the objectives and aims are shifting continuously and progressing in accordance with the individual's growth (Donati & Watts, 2005). Ivtzan, Chan, Gardner and Prashar (2013, p. 920) add that a personal growth initiative "is based on the idea that continued personal growth throughout life is important for a healthy individual as they encounter new challenges, transitions, and experiences". Development must be a purposeful, structured and specifiable activity, aimed at acquiring distinct qualities and skills (Donati & Watts 2005; Eggert, 2013; Travers, 2013).

Individuals must be given the opportunity to become familiar with their weaknesses and strengths. Such knowledge will help them grow self-understanding of their personal development (Eggert, 2013; Kersten, Vervoorn, Zijlstra, Snyders Blok and Van Eijden, 2007). It is important that individuals should be aware of their personality patterns, motives, and behaviour as well as their ability and willingness to change these aspects in a positive light (Ivtzan et al., 2013).

### **Interpersonal skills**

Interpersonal development can be described as goal-directed behaviour that includes relationship-building and communication competencies (Lindsey & Rice, 2015; Oliver, 2012). In this regard, interpersonal development entails the skill to manage interactions outside and inside the organisation in which the individual works; this includes teamwork, communication, mediation,

and coaching (Tanius & Susah, 2013; Van Kemenade, 2012). Interpersonal skills can be defined further as the ability to listen, showing empathy, having understanding, getting along and persuading others, ability to work in teams, and knowing how to resolve and cope with conflict (Borg & Johnston, 2013; Hartle, Kavanagh & Zraa, 2011; Rentz, Shepherd, Tashchian, Dabholkar & Ladd, 2002; Rosenberg, Heimler & Morote, 2011).

Interpersonal relationships cannot exist without communication and forms the foundation for all human and social interaction (Robbins & Hunsaker, 2012). Robbins and Hunsaker (2012) add that communication can be defined broadly as “any verbal or nonverbal behaviour that is perceived by another person” (p. 76). Verbal communication includes sound and noise to convey a message, whereas non-verbal communication consists of facial expressions and body language (Verderber & Verderber, 2013). According to Verderber and Verderber (2013), listening can be defined as “the process of receiving, constructing meaning from and responding to spoken and/or nonverbal messages” (p. 196). Numerous misunderstandings are caused through ineffective listening. Thus, it is important to listen with empathy, intensity, acceptance, and the willingness to accept responsibility to ensure one fully understand the message (Robbins & Hunsaker, 2012).

In a recent survey, employers rated interpersonal skills as the “number one differentiator” during the recruitment process across all industries, thus emphasising that such skills are important for all types of occupations (Babić & Slavković, 2011; Lindsey & Rice, 2015). Individuals who show sound interpersonal skills are more likely to cope with undesirable behaviour, interact without difficulty with others, and improve their ability to determine appropriate self-behaviour (Lindsey & Rice, 2015). Employees who have decent interpersonal skills are less likely to experience the skills gap that most newly graduates do; they also tend to deliver better job performance (Rosenberg et al., 2011). Superior interpersonal skills will enable individual employees to be better team players, collaborate with others comfortably and adhere to strict deadlines (Lindsey & Rice, 2015).

There are several potential functions of service-learning for interns. Such functions include: acquiring cognitive skills and knowledge as well as demonstrating core employable competencies such as interpersonal skills (Deba, Jabor, Buntat & Musta'mal, 2014). Interns function as potential

employees. Thus, their values, interpersonal and personal emotional awareness, and skills development can be improved by incorporating service-learning with a focus on emotional intelligence (Manring, 2012). Interpersonal skills are generally learned on the basis of experience. Thus, these skills can be learnt best through an experiential learning approach, which typically exposes graduates to real-life work environments (Deba et al., 2014).

### **Intrapersonal skills**

In simple terms, intrapersonal skills relate to individuals' ability to know and manage themselves (Rauf & Ismail, 2011). This entails the ability to grow and develop skills such as self-awareness, reflection, as well as recognising and handling emotions (van Kemenade, 2012). The focus of intrapersonal development is increasing self-identity, awareness of one's values, and implementing these into one's everyday life and way of living (Braskamp & Engberg, 2011). Braskamp and Engberg (2011) explains this process, "The end of the journey on this dimension is a sense of self-direction and purpose in life; greater awareness of one's strengths, values, personal characteristics, and sense of self; and a view of one's own development in terms of self-identity" (p. 35). Susanti (2011) adds that intrapersonal skills include emotional awareness, self-awareness, and self-confidence.

Emotional awareness enables individuals to make wise decisions and enhance their problem-solving skills by using both feelings and thoughts (Brackett, Rivers & Salovey, 2011). Prins, Van Niekerk and Weyers (2011) point out that "an individual's ability to perceive his or her emotions accurately, being able to control and regulate such emotions effectively, and interacting effectively with others will, to a large extent, influence the individual's workplace effectiveness" (p. 7). Self-awareness can be viewed as a higher-level perception, which entails the extent to which individuals are knowingly aware of their internal states and their relationships or interactions with others (Sutton, Williams & Allinson, 2015). Taylor (2010) states that self-awareness leads to the discovery of character traits, identification of weaknesses, strengths and a calling or purpose, core motivations, values and desires, all helping individuals develop their identity.

From the discussion above, it is evident that self-awareness is important, Cilliers (2011) found that individuals are extremely reluctant to explore their feelings and needs. However, through coaching over an extended period, individuals become more comfortable with the idea of talking about their feelings and needs. When intrapersonal skills are developed, individuals improve their coping mechanisms, make better decisions, and have a good sense of understanding (Vijayalakshmi, 2016). Vijayalakshmi (2016) points out that people with sound intrapersonal skills are more in zinc with their own emotional state, feelings and motivations. This gives them a positive feeling about their daily activities.

### **Service learning**

The National Research Foundation (NRF) launched a programme during 2005 where unemployed graduate students from science, engineering, and technology were offered an internship as part of service learning at different institutions across the nine provinces in South Africa (NRF, 2015). Unemployed graduates and postgraduate students interested in research support, research management, and administration at research agencies and public HEIs, were also allowed to utilise the opportunity. The aim of the programme is that a designated group of students gain hands-on work experience through exposure to the research environment and guided by mentoring (NRF, 2015). The internship is unstructured and the only prerequisite is that hosting institutions provide practical and technical experience during the year. The type of practical exposure interns gain will also differ from hosting institutions.

Since the programme's inception to the end of the 2014/2015 internship year, the NRF assisted 3 549 unemployed graduates (Ncango, 2016). However, after investigation it was determined that only 21% of the interns went on to further their studies; 34% joined the workforce; while 45% remained unemployed after the internship (Ncango, 2016). Tertiary education institutions provide internship programmes and function as hosts annually for these interns. The institution on which the present study focused provide such an opportunity to approximately 15 interns each year.

The aim of this study was to evaluate an interpersonal development programme for science, engineering, and technology NRF interns at a tertiary education institution. These students were given the opportunity to grow and develop as a person. Thus, there was the possibility that they

would not only be equipped with vital skills, but during the service-learning process they also obtained valuable work experience that would differentiate them from others in their future work environment. The research focus led to the formulation of objectives, which are expounded below.

### **General objective**

The general aim of this research was to evaluate an interpersonal development programme for science, engineering, and technology NRF interns at a tertiary education institution.

### **Specific objectives**

The general objective was broken down into specific objectives of this research:

- Explore how an interpersonal development programme for science, engineering, and technology interns is conceptualised within the literature.
- Investigate what the content and methodology of an interpersonal development programme for a specific population of interns at a tertiary institution is.
- Determine what the experience of the population after the interpersonal development programme was.
- Make recommendations for future research.

### Research design

#### **Research approach**

A qualitative research approach was followed for the present study. Qualitative research comprises a thematic synthesis or informational content, phenomenological descriptions, grounded theories, narrative, or explanations through ethnographic dialogue. Furthermore, qualitative research entails coherent and integrated interpretations of aspects that are targeted in the social world through a study and new knowledge gained by analysing the gathered data (Sandelowski & Leeman, 2012). Methods used during qualitative research include non-numerical sources of data such as informant diaries, interviews, and observation of the participant (McLeod, 2013).

Social constructivism was utilised in the present study as philosophical foundation and can be defined as a school of thought that underlines the interactive and collaborative nature of definition-making and learning (Dyer, 2016). The facilitation sessions were interactive and the researcher deliberately involved interns in order to explore their perspectives and perceptions. The phenomenological approach was also followed, of which the main aim is to understand the essence of individuals' experiences about a certain phenomenon (Nieuwenhuis, 2016). The researcher wanted to determine what the interns perceive as interpersonal skills, whether it is useful in their careers and what recommendations they will make for a future development programme.

### **Research strategy**

The strategy of a case study was used during this study. Such a strategy is typically used to describe a community, event, system, or an individual (Wright, 2014). More specifically, an instrumental case study was employed and played a supportive role helping the researchers understand a particular phenomenon (Nieuwenhuis, 2016). Nieuwenhuis (2016) explains further "The case is often looked at in depth, its contexts scrutinised, its ordinary activities detailed, because it helps the researcher pursue the external interest" (p. 83). The case that was investigated during this study was NRF interns' experience of an interpersonal development programme at a tertiary education institution. All participants were NRF employed interns at the same tertiary education institution in South Africa. All interns were either in the field of science, technology or engineering.

The research for the present study took place in the form of a pilot study. Almirall, Compton, Gunlicks-Stoessel, Duan and Murphy (2012) describe a pilot study as "a small-scale version of the larger study with the aim of fine-tuning the study design, evaluating its feasibility and acceptability" (p. 1889). By conducting a pilot study, the researcher may gain information about instances where the main research project may be insufficient. Such a study can also be utilised to convince bodies that the study is worth funding (Van Teijlingen & Hundley, 2002). The researcher wanted to confirm that interns are indeed experiencing difficulties relating to interpersonal skills and that a development programme would address this. Potential practical problems in the research procedure can be identified; however, pilot studies may also make inaccurate assumptions or predictions (Van Teijlingen & Hundley, 2002). The pilot study would also provide insight as to what can still be added to the programme, what challenges are experienced during the execution

phase and how it can be upscaled to larger groups and organisations. Challenges and problems that occurred during the study will be discussed as part of the limitations and recommendations of the study.

### Research method

#### **Literature review**

A complete literature review investigated the following topics: emotional awareness, intrapersonal skills, interpersonal skills, interpersonal development, interns and service-learning. Scientific material was consulted from various sources such as:

- Academic Search Premier;
- Ebscohost;
- Emerald Insight Journals;
- Google Scholar;
- Google;
- NWU Library book collection;
- SAePublications;
- Science Direct; and
- South African Journal of Industrial Psychology (SAJIP).

The focus was on references from 2010 to 2018, with older references as an exception.

#### **Research setting**

The study was conducted amongst science, engineering, and technology interns at a tertiary institution where the data were also gathered. The researcher utilised the interpersonal training programme that was developed by the main supervisor of this study. The initial programme covered personality traits and a personal growth initiative. This programme was adapted in line with the most recent literature related to the topic (specific interpersonal development skills for science, engineering, and technology interns) as well as the needs of the NRF interns. The training programme consisted of a series of short seminars geared to develop inter-and intrapersonal skills. The seminars involved one to two days' training sessions presented for six consecutive months with each month's seminar focusing on a specific skillset. Topics covered during these sessions

included personality traits, giving and receiving feedback, conflict management styles and a personal growth initiative. Typical methodologies for the presentation were: short lectures, a self-read-and-do method, encounter groups, role-play, and individual assignments. The setting for the training programme included a well-ventilated venue, appropriate lighting, and comfortable furniture. The venue was also separate from any participants' workplace.

### **Entrée and establishing researcher roles**

Access was negotiated by the co-supervisor for the researcher to assist on a research project of which the interns form part. The mentors of the interns were also contacted to obtain their consent and commitment. The relevant parties were contacted through email or telephonically and an additional email was sent that explain the process.

The researcher had to build rapport with participants and assured them of the right to withdraw, voluntarily, from the study at any stage – without repercussions. The main purpose of the research study was explained and known risks of participation identified (Creswell, 1998).

The researcher had to fulfil numerous roles. This implied an ethical responsibility to ensure the researcher was adequately skilled and competent to carry out the research study (Strydom, 2011). It was also crucial that both researcher and participants respect each other's cultures, background and values, and appreciate each individual's unique contribution to the process (Strydom, 2011). It was important that the researcher remain objective during the research process and refrain from value judgements or enforcing her point of view on participants (Strydom, 2011).

Roles fulfilled during the training programme and focus group sessions more specifically entailed those of facilitator and transcriber. The researcher's role as facilitator meant gaining the trust of research participants. Carey and Asbury (2012) point out that the quality of the gathered data depend on the development of trust between facilitator and participants and will determine whether the latter will open up. Even though the focus group discussion was recorded (with participants' permission) it was also important to note down other forms of information such as facial expressions and body language (Carey & Asbury, 2012). The facilitator had to be informed about

the topic and the participants' background (including their preferred language) to ensure the focus group session ran efficiently (Carey & Asbury, 2012).

## Sampling

Homogeneous sampling was done as part of the purposive qualitative procedure during the study. Typically for purposeful sampling, the sample size is not finalised beforehand; rather it is adapted throughout the study (Struwig & Stead, 2001). Homogeneous sampling involves individuals with the same characteristics to provide a detailed image of a certain phenomenon (Nieuwenhuis, 2016; Wright, 2014). The mentioned sampling is normally used to illustrate issues among a smaller group with a similar background (Struwig & Stead, 2001).

All participants to the study were NRF interns in the field of science, engineering, and technology. Each year, tertiary education institutions receive a different number of interns, depending on the applications and available institutions. Thus, homogeneous sampling is the most appropriate method if primary data sources contributing to the study are limited. Such a sampling method is ideal to discover meaning, and is time and cost effective (Dudovskiy, n.d.). It is important to note, however, that the research findings cannot be generalised. The bias of the researcher may affect the reliability of the data, which means errors may occur due to personal judgement (Dudovskiy, n.d.). The biographic characteristics of the participants are presented in Table 1 below.

Table 1

*Research participants' characteristics (n=10)*

Item	Category	Frequency	Percentage
Gender	Female	8	80%
	Male	2	20%
Age	22-23	2	20%
	24-25	5	50 %
	26-27	3	30 %
Language	Afrikaans	3	30%
	English	1	10%
	Tswana	3	30%
	Sesotho	1	10%
	Zulu	1	10%
	Tsonga	1	10

Race	Black	6	60%
	White	4	40%
Internship field	Engineering	0	0%
	Science	10	100%
	Technology	0	0%

Table 1 above indicates that there were 10 participants in the research sample. The sample was subdivided further in terms of gender, indicating that the majority of the population was female (80%) and the rest male (20%). The group's age varied from 22 years to 27 years, with half of the sample from 24-25 years (50%). Participants spoke mostly Afrikaans and Tswana (30%), with single participants speaking English (10%), Sesotho (10%), Zulu (10%), and Tsonga (10%), respectively. Finally, the sample group was found to be represented by 60% Black, and 40% White participants. All 10 participants graduated and completed their internships in the field of science. During the research process, two participants (20%) withdrew as they found other employment.

### **Data collection methods**

Data were collected during the study by means of focus group discussions. The purpose of a focus group is to obtain rich and detailed data (Carey & Asbury, 2012). The focus group approach usually entails sessions, which are semi-structured and presented in a comfortable setting, guided by a facilitator and at times, a co-facilitator; and make use of general questions (Carey & Asbury, 2012).

During the focus group sessions, participants shared their ideas, opinions and provided insight into the phenomenon under investigation. To make such focus groups more effective, the researcher ensured the group consisted of not too many participants (Krueger & Casey, 2009). Individuals who were identified to participate in the focus group shared certain characteristics which the researcher valued. Such characteristics could assist in decision making and in developing a programme (Krueger & Casey, 2009). When the focus group was held it was crucial to remember the challenges: participants tend to intellectualise behaviour; may contrive answers to avoid embarrassment; and dominant individuals could influence the results (Krueger & Casey, 2009).

The facilitator of the focus group showed respect towards participants, communicated clearly, understood the purpose of the topic and study, and came across as open and approachable, not

defensive (Krueger & Casey, 2009). During the focus group discussion, the facilitator captured the conversation (data) through various ways such as memory, field notes, and voice recorder. At the beginning of the session, the facilitator welcomed the participants, provided an overview of the topic, established general ground rules and launched the discussion with an opening question (Krueger & Casey, 2009). Throughout the discussion the facilitator employed techniques such as pausing, probing, nodding the head, responding to comments made by participants, and short verbal responses (Krueger & Casey, 2009).

Prior to presenting the interpersonal development programme, a focus group was held with the participants to understand their needs regarding the topic of the study (intra- and interpersonal skills). The following questions were posed:

- a. What do you regard as interpersonal skills development?
- b. Which interpersonal development areas do you identify in yourself?
- c. In which ways would you like to see the development needs addressed?
- d. How do you think you could utilise interpersonal skills in your profession?

The supervisor's interpersonal development programme included the topics self-awareness and personal growth initiatives. After the first focus group was conducted and the interns' needs were identified the development programme was adjusted accordingly. The development programme that was going to be implemented during this research study included topics of self and other awareness, giving and receiving feedback, conflict management styles and personal growth initiatives.

The participants' impressions were gathered after the interpersonal development programme was concluded by focus groups, where the following questions were included:

- a. What do you regard as interpersonal skills development?
- b. What was your experiences of the interpersonal development programme?
- c. What was your experience of the content of the interpersonal development programme?
- d. What was your experience of the method of presentation for the interpersonal development programme?

- e. Do you regard the programme as effective in addressing your development needs as discussed during the first focus group?
- f. How do you think you could utilise interpersonal skills in your profession?
- g. What recommendations do you have to enhance the quality of the content of the programme?
- h. Do you have any other recommendations/comments?

### **Recording of data**

The focus group session was recorded with an electronic voice recorder. Data were transcribed into an Excel spread sheet that was password protected. During the session, field notes were taken covering body language and facial expressions. Written informed consent was requested beforehand to record the interview.

### **Data analyses**

The main objective of data analyses is to make sense of the gathered information. When qualitative data were analysed, the researcher refrained from a fixed linear approach (Creswell, 1998), therefore the decision to follow Creswell's analytical spiral approach. This consisted of nine steps, which are expounded below (De Vos, 2011).

1. *Planning to record data:* Plan systematically how data will be recorded, with an approach suitable to the participants and setting. A system must be set in place to retrieve data easily for analysis.
2. *Data collection and preliminary analysis:* Firstly, analyse the data that were collected at the research site. Thereafter, analyse after the research data have been collected and completed. It is crucial that the researcher maintains a balance between these two aspects to ensure thorough conclusions.
3. *Managing/organising data:* This is the first step of data analysis done away from the site. An inventory should be made of the generated data and determined whether the field notes are complete. The researcher transcribes the recorded data from the focus group into an Excel spreadsheet. When the researcher works through the data, normally insights emerge.
4. *Reading and writing memos:* During the following step, researchers familiarise them with the gathered data as a whole. By writing memos and taking notes, the researcher can

explore the database more in detail. Memos can include short ideas, phrases, or key concepts that occur to the researcher.

5. *Generating categories, themes and patterns*: This step represents the heart of qualitative research. This process requires sensitive awareness of the data, with focused attention on the data and openness to subtle connotations of social life. During this process, the gathered data are taken apart and investigated to identify dimensions, categories, or themes.
6. *Coding the data*: This step can also be described as a formal representation of analytical thinking by the researcher, who applies a coding scheme to the identified themes and categories. There are several forms of coding, for example, through coloured dots, abbreviations for certain words, or numbers – the method remains the researcher’s choice.
7. *Testing emergent understandings*: The researcher examines the data and challenges prior understanding of the data, investigate new information to identify negative instances of patterns and integrate these into larger constructs, as needed. During this step the researcher must determine the centrality and usefulness of the collected data.
8. *Seeking alternative explanations*: Despite identifying patterns and categories, the researcher must still critically challenge the patterns that seems apparent. It is important to remain open-minded and consider alternative explanations.
9. *Writing the report*: This is the final step of the research spiral. This report summarises and reflects the complexity of the raw data that were gathered. The report is presented in the form of a dissertation for the purpose of the present research study.

### **Strategies to ensure quality data**

Qualitative methods of data collection are often criticised for being subjective, influenced by research bias, anecdotal, and unable to generalise findings (Cope, 2014). However, several strategies were employed during this study to ensure trustworthiness: credibility, transferability, dependability, and confirmability (Cope, 2014; Urban & Van Eeden-Moorefield, 2018).

*Credibility*: the degree to which the findings represent the reality of participants’ perceptions and experiences. For the present study, the researcher ensured the findings represented the lives of participants and not her experience and beliefs about the participants. Previous theory and research did not influence the way the researcher interpreted the gathered data. The researcher ensured

sufficient questions were posed to explore varied experiences and potential realities of participants (Urban & Van Eeden-Moorefield, 2018).

*Transferability:* the extent to which findings from one study can relate to other contexts, situations, or populations. Furthermore, sufficient information should be provided on the context of the research to determine whether the findings can apply to other situations of people (Urban & Van Eeden-Moorefield, 2018). An overview of the implemented interpersonal development programme was discussed under the results section. This is followed by a detailed discussion what each session entailed.

*Dependability:* the level of consistency related to the results and findings. The researcher is responsible to ensure findings make sense to others, even if they do not essentially agree with such outcomes. More than one coding source was consulted for the present study (Urban & Van Eeden-Moorefield, 2018). The researcher, supervisor and co-supervisor were all involved in the identification of themes and subthemes. This ensured that the data was analysed from different perspectives.

*Confirmability:* the extent to which the researcher monitored, was aware of, or avoid bias and prejudice that may have influenced the research process and findings. The researcher investigated how her own beliefs may represent bias and remained mindful of this issue throughout the research process. The researcher also made notes during the analysis about insights, thoughts, or possible codes (Urban & Van Eeden-Moorefield, 2018).

## **Reporting**

A qualitative writing style in essay format reported the findings. Themes were identified through data analysis and by determining headings and subheadings. During the reporting of findings, the researcher attempted to remain objective.

## **Findings**

The findings of the research study were divided into a set of categories, themes and subthemes. Themes and subthemes were supported with direct quotations of participants' responses, to support

results and findings. Five categories emerged from the findings, including themes and subthemes that were extracted. These categories are presented in Figure 1 below.



**Figure 1:** *Overview of categories*

The various categories shown in Figure 1, are discussed in detail below.

### **Category 1: Needs assessment**

The first category refers to a needs assessment of NRF interns. A focus group was facilitated during the initial phase of the research with the interns. During this session they were asked which interpersonal development areas they identify in themselves. The extracted data could be divided into two themes with various subthemes – as presented in Table 2 below.

**Table 2**

*Needs assessment of NRF interns*

Theme	Sub-theme	Response
Defining interpersonal skills development	Communication	“I think it is the ability to accurately communicate your thoughts, the ideas that you have ... in a manner that is appropriate to the specific situation that you are in.” (P 1)
	Relatedness	“... the social skill set you have of speaking to other people or communicating to other people efficiently.” (P 7)
		“I would think it is how you relate ...” (P 3)

*“... and relating with other people and the workload.” (P 5)*

Adaptability

*“I speak differently to my mentor, to my employer than I do to my friends and it is about adjusting the way that you are communicating different ideas to different people regarding a situation.” (P 1)*

*“So now you go to the workplace ... and you meet people that have different religions, believes or different views on life, and how do I communicate with you without hurting you or disagreeing with you like you were saying confrontation and things like that. So, the adjustment for me is you are now not with your peers all the time you work with a lot of older people where there is a level of I don't know if it is a cultural thing but there is a level of respect if maybe you say I did something wrong and I know I was right I'm not going to say [it].” (P 2)*

Self-awareness

*“I think emotional intelligence ... how you handle emotions when you are relating with other people how you handle stress” (P 6)*

Other awareness

*“To me it feels like either this person doesn't like me, is not friendly enough, so I had to not take it personally that it is how a person is” (P 2)*

*“Being approachable ... not being the person that is just in your office sitting and working nobody really knows what you are doing but you are doing it well. I don't think that matters as much as constant relationships with people you are working with because that is the greatest motivator because then you feel accountable to your stakeholders because they actually care not because you have to be signed of at some stage but because they know you” (P 1)*

Maturity

*“Experience ... for example, primary school very small group and then you go to high school; and there's some different cultures involved; there's different age groups. Then university is very big: you've got your lecturers and you've got your peers ... you've got your friends outside of university, some are working, some are not; and then you come to the working environment and it is entirely different again, so I think experience as in the people and cultures that you meet, traveling, working versus studying.” (P 1)*

*“... high school ... I was the playful kind of girl that always would make noise in class, the loudest ... as well in 'varsity you get to do it's all on your time whether you want to study or play ... and then I get to the workplace and I need to have this seriousness at some point of saying there is time to work and there is time to play.” (P 3)*

Interpersonal  
sensitivity

*“I can say patience because ... I go there at the lab and then that one person will come, wants to explain how their weekend was, like everything; and that time I want to do something so you just say 'Yeah.' Just pretend that I'm listening to whatever they are saying, I'm interested and just brush them off and say no I have to go somewhere.” (P 4)*

*“People tend to come to me like when they have problems and then I would have to advise them or just talk to them; and then at the end of the day I would like to see*

		<i>that person happy or the situation solved or something like that, and most of the time I happen to help them.” (P 8)</i>
	Boundaries	<i>“One day you are the manager or leader or professor to have that open-door policy ... I feel like you should have boundaries. Obviously you know, don’t come to me with every small problem that you have. I mean, there has to be clear boundaries ... define where that line is but I think the bottom line is just to have that open-door policy.” (P 2)</i> <i>“I feel like sometimes I am a bit of a people pleaser. So, I don’t actually want to let someone down even if I know it is good for me not to have that extra stress ... I would rather try and see it through, but I know there is a point where I need to be ... the authority in my own life, saying: ‘Okay no, this is where I draw the line ... ’” (P7)</i>
	Self-expression	<i>“Continual voicing your opinions instead of keeping everything to yourself. Not taking things personally also if someone critiques me I should know that it’s for my growth my development.” (P 4)</i>
Areas of development	Conflict management skill	<i>“I have a discomfort when it comes to confrontations ... I have been sometimes honest, but ... in terms of confrontations, I would just let it slide even though I know that was not appropriate.” (P 3)</i> <i>“I don’t like getting myself into conflict situations.” (P 7)</i>
	Accepting criticism	<i>“... able to accept criticism I think that is one of the factors that I still need to get through.” (P 5)</i> <i>“Taking things personally sometimes.” (P 4)</i>
	Self-confidence (how to approach people)	<i>“I can’t do the small talk thing. I just walk in and sit there really awkwardly [laughs] and then my friend would come and say: ‘Just talk to people,’ and then I would talk to people if we are in a social situation but, yeah, I am not that comfortable walking up to someone.” (P 9)</i> <i>“Sometimes it is important to back yourself and ... I tend not to back myself when I do anything ... even if I know this is something huge that could be a career changer or a life changer... it frightens me a bit to just go out there ... my fear is failure I don’t want to fail in something.” (P 7)</i>
	Communication	<i>“... but I just mean how to communicate to certain stakeholders ... there is really nothing that is more motivating than a present promotor or study leader that... knows exactly where you are, what you are busy with, and you know exactly what she is busy with and there is a constant communication.” (P 1)</i> <i>“When you are busy communicating with a higher authority ... I feel incompetent like ... I don’t want to say something dumb or let it sound like I know something, but I actually don’t, or it is the wrong thing to say.” (P 9)</i>
	Self-awareness	<i>“I have been told in the past year that I come across as very unapproachable and I really don’t want to talk to you, which I really am not [laughs] but I think that is something that I would like to change because it is definitely not the way that I want to be portrayed.” (P 1)</i>

“... to stop being shy (laughs)... and interact with other people and like stop being an introvert and being an extrovert ... I think it is a disadvantage.” (P 6)

Self-actualisation “I am really afraid of not reaching my full potential. I don't know how to explain it. I think that is something for me that .yeah. that scares me.” (P 8)

### ***Theme 1: Defining interpersonal skills development***

During the first focus group discussion it became evident that participants made sense of interpersonal skills as a topic by defining particular skills and areas of development. They used several terms such as communication, relatedness, adaptability, to name a few, which are discussed subsequently as subthemes.

*Communication:* Table 2 above clearly indicate that participants perceived communication as an important interpersonal skill. It entails the ability for accurate communication of thoughts and ideas according to the requirements of a situation. This also implies conveying a message effectively to others on different levels of a hierarchy.

*Relatedness:* Certain participants indicated that relatedness as interpersonal skill describes the ability to associate with other people and their workload or situations. This is how individuals work and interact with others around them.

*Adaptability:* The participants felt adaptability implies the ability to adjust to different situations and environments. Participants would approach and interact with their mentor differently than with one of their friends. The workplace consists of people with different views, religions, and believes. Thus, employees with sound interpersonal skills can adapt to each person's preference. Individuals may move from a smaller, intimate enterprise to a larger corporate organisation, forcing them to adapt to the unfamiliar environment.

*Self-awareness:* The participants linked their level of self-awareness to interpersonal skills (“I have never actually put into too much thinking... doing my daily living.” P 3). They also mentioned that emotional intelligence and a person's attitude influence interpersonal skills.

*Other awareness:* Being aware of others and their different personalities was regarded as interpersonal skills. Certain participants pointed out that at times, people will not like you, but you must learn to accept and deal with such circumstances. Being aware of others was also linked to having an approachable attitude.

*Maturity:* Participants viewed interpersonal skills as an ability developed with experience as one gets older. The difference between studying and working was also emphasised: one may be playful at university but takes matters seriously in the workplace.

*Interpersonal sensitivity:* Participants stressed the need to be sensitive when interacting with other people. This entails the ability to show patience and pay attention when someone is talking. In addition, it implies the ability to assist people when they approach one with personal problems, read the situation, and react appropriately.

*Boundaries:* It was deemed important to establish boundaries in the workplace, but also having an open-door policy and the challenge to maintain a balance between the two. A few participants mentioned that they considered themselves as people pleasers and at times it can be exhausting to try and satisfy everybody's needs and standards.

*Self-expression:* One participant stressed the importance of: “*Continual voicing your opinions instead of keeping everything to yourself. Not taking things personally also if someone critiques me I should know that it's for my growth my development.*” (P 4)

### ***Theme 2: Areas of development***

The second theme identified from the data in Table 2 was *Areas of development*. Participants had to identify interpersonal skills which they thought were lacking in themselves; the subthemes are discussed below.

*Conflict management:* The majority of participants admitted that they struggle to deal with conflict situations and felt that conflict management should be included in training of interpersonal skills.

Participants acknowledged that they would rather avoid conflict and look the other way than address it.

*Accepting criticism:* A number of participants admitted that they take feedback or comments too personally, thus this subtheme could be addressed during a training session. They found it difficult to accept criticism from people.

*Self-confidence:* Most participants identified the ability to network with others and approach them, as a skill that must be developed. They frequently mentioned the ability to voice an opinion or raise a question without being self-aware or afraid to come across as unintelligent. As described in Table 2 above, P 7 mentioned that they find it challenging to back themselves in a situation which often leads to self-doubt and second guessing.

*Communication:* Participants mentioned being able to communicate to different stakeholders and individuals on different levels of a hierarchy. One participant points out the difficulty of communicating over a telephone without non-verbal cues that indicate the other person understands (*"I struggle to call someone on a phone ... I don't know and strike up a conversation ... I would rather go face to face."* P 7).

*Self-awareness:* The participants mentioned individuals' ability to be more aware of themselves and how they come across. They identified this as an area that must be addressed during a training session. This implies ability to receive feedback, even criticism, and use it to improve and grow.

One participant specifically mentioned the fear of not reaching their full potential in self-actualisation (*"I am really afraid of not reaching my full potential ... that scares me."* P 8).

Based on the outcome of the needs assessment, the existing interpersonal skills development programme available to students, was adapted and is discussed subsequently.

## Category 2: Interpersonal development programme

The second category identified from the analysed data was the content of the interpersonal development programme. Topics were identified from Category 1, the needs analysis, and content for sessions were developed accordingly. These aspects are presented in Table 3 below.

**Table 3**

### *Interpersonal development programme*

Topic no.	Topic	Outcome	Time	Methodology
1	Giving and receiving feedback	Provide participants with an effective feedback tool. The keep-, stop-, start-, doing model was utilised. Participants were challenged to make appointments with their supervisors for feedback.	3 hours	Presentation was followed by an interactive group discussion. Participants practiced giving feedback to one another.
2	Self-awareness and other awareness	Raise self-awareness through personality questionnaires. Gain insight into own personality traits and awareness regarding other people's personality and traits through a personality-window exercise. Provide personalised reports and individual feedback.	3 hours	Psychometric assessment. Administer personality assessments. Personality-window exercise.
3	Conflict management	Identify each participant's conflict management style. Practical implication discussion through case studies and scenarios.	3 hours	Administer a conflict style questionnaire. Participative group discussion.
4	Personal-growth initiative	Create awareness of personal growth process. Facilitate this process through workshop.	3 hours	Administer a personal-growth-initiative scale. Facilitate a personal-growth workshop.

### ***Topic 1: Giving and receiving feedback***

A presentation explained the process of feedback, the ground rules, and provided general tips. During the presentation, group discussions took place to ensure an interactive session. Participants raised concerns and questions while the facilitators shared their experience. Thereafter,

participants practiced giving feedback to each other on what they should keep, stop, and start doing. Throughout the process, the facilitator present reminded them of the rules of engagement. Individual participants left the session with a handout, which gave them the information covered during the session.

### ***Topic 2: Self- and other awareness***

Each participant completed psychometric personality assessments beforehand. First, the participants were divided into two groups according to their personality preferences based on results of their personality assessment. Case studies and group work were introduced where participants had to explain how, according to their personality, they would handle or react to a situation. This helped them understand the different preferences, based on personality, in various scenarios. The exercise highlighted how diverse people function and approach life. Participants became aware of both their own functioning and how other people operate. Personalised reports were written for each participant and one-on-one feedback sessions were arranged where each participant received feedback and had the opportunity to ask specific questions.

### ***Topic 3: Conflict management***

A conflict style **questionnaire** was completed. The questionnaire identified the certain styles an individual applies when facing conflict. A group discussion took place where participants shared their results and their thoughts on ways their styles influence their own behaviour. Different conflict scenarios were given to each pair of participants, allowing them time to apply a role-play exercise to different conflict scenarios.

### ***Topic 4: Personal-growth initiative***

Participants completed a Personal-growth Initiative Scale at the beginning of the session and then a workshop on personal-growth initiative was facilitated. Participants were guided through the entire process and completed activities in their workbooks. At the end of the session each participant shared one aspect they chose to work on and wanted to change or improve. The facilitator contacted participants a week later to follow up on their progress and experience of the process.

Participants received reflection diaries as part of the development programme. After the first focus group, the facilitator explained why reflection is important for learning and how participants can approach this process by following guidelines. The idea was that participants reflect in their own time after each session.

After the programme, a second focus group was facilitated to gain insight into the experiences of the participants and ways they reported on their interpersonal development and perceived the programme; these experiences are reported subsequently. The researcher presenting the interpersonal development programme did not facilitate the second evaluation focus group. This was to ensure participants responded as truthfully and honestly as possible about their experience.

### **Category 3: Experiencing the content of the interpersonal development programme**

The findings of how the participants’ experienced the interpersonal development programme is discussed below since this forms the essence of the study. The research aimed to determine whether the programme addressed identified needs and how participants experienced it. The themes and subthemes captured in the responses are presented in Table 4 below (P = participant; F = facilitator).

Table 4

#### *Experiencing the content of the interpersonal development programme*

<b>Theme</b>	<b>Sub-theme</b>	<b>Response</b>
Conflict management skills	Empower	<p><i>“It helped me a lot ... I had a few conflict situations and I am typically a person that runs away from conflict ... I would rather just avoid it ... so, for me it really helped me to handle conflict like after my first conflict that I had at work I could handle it in a mature way and talk about it ... instead of let the problem just go on.” (P 9)</i></p> <p><i>“It was never really something that I thought of the way I used to do it ... but then we had a conflict session and now in the communication part of interpersonal skills it kind of makes up half of it like: how do you handle arguments and feedback? ... So, it is just something I am thinking of now that I know I didn’t think of before.” (P 2)</i></p>
	Self-confidence	<p><i>“I had the confidence to go and say: ‘Okay well, I don’t like how you are handling me. This isn’t my job to do this ... let’s get resolve this by doing this’ ... I could go to the person saying: ‘This is what I think.’” (P 9)</i></p> <p><i>“This programme has helped me a lot. Now I can speak up for myself. I am more confident now and I can approach conflict situations in a calm manner.” (P 6)</i></p>

	Problem solving	<p><i>“Instead of just telling the person that you don’t have time to do something, you would sit two hours after your work time to do it just to avoid the conflict ... Instead of that, I presented another solution ... I am not sitting two hours after my worktime anymore.” (P 9)</i></p> <p><i>“One thing that I have learned: if you want something you must also not wait for somebody else to ask you about it. You must, you know you might have the same thought, but she might just wait for me to actually say something before she give me what I want.” (P 3)</i></p>
Communication	Sensitivity to diversity	<p><i>“It is still communication like I had this language barrier thing I was just comfortable with say my Tswana language and I work in a place where most of the people talk Afrikaans ... I’ve learned how to be comfortable ... to talk with people in another language that is not mine ... I have learnt that language is not what defines me and all that. If maybe people are busy I would just go afterwards and say: ‘Didn’t understand this. Could you explain it to me, or ‘Can you communicate it in English?’ or something.” (P 8)</i></p>
Interpersonal skills development	Maturity	<p><i>“So, maybe just to summarise: there are uncomfortable situations ... and the programme such as this build into the communication skills a way to address uncomfortable situations; not necessarily always referring to language – it can be anything. There is also a level of maturity and level of self-confidence to be able to point someone’s attention to a specific situation where you are excluded in a kind way.” (F 3)</i></p> <p><i>“Something that stood out was I tend to take responsibility for stuff that could go wrong that is not my responsibility so it is actually I stopped doing that.” (P 9)</i></p>
	Self-confidence	<p><i>“I can mostly add to ... what to what P 6 said about communication skills when there is Afrikaans in a room also. This actually happened the other day to us when I was talking to a professor. She approached it quite well by asking: ‘Is this what we said?’ And then all of the sudden you realise: Okay, no switching over to English ... also not to put all the shine on P 6 but ... you can listen to the first focus group and it would be a much more softer voice and now it is a confident voice” (P 7)</i></p>
	Other awareness/ Feedback	<p><i>“Not to put all the shine on P 6, but I mostly work with her so... So sorry for putting you in the spotlight but ... it is also amazing what this interpersonal skills sessions has done to her confidence when speaking.” (P 7)</i></p> <p><i>“So, in other words, you see the development in each other. That is awesome. Wonderful.” (F 3)</i></p>
	Self-awareness	<p><i>“When I actually received my feedback, I was like: ‘Yeah, that sounds like me,’ but it is different from knowing something and hearing it from somebody else. Somebody pointing it out like: ‘Okay, this is what your questionnaire said; this is your type of personality,’ it is different ... You tend to notice more; especially when you are handling other people, you notice: I should stop doing this ... you notice stuff like that and you work on it ... I also realized the things that you maybe thought was not good personality traits became clear that actually it is not a bad personality trait that you have.” (P 9)</i></p>

*“That was quite interesting for me ... it confirm a lot of your traits and ... just know you are normal in the way you react and act towards certain situations which makes it quite nice ... I personally believe you can learn a lot from knowing yourself better in such a way ... I think it is a great thing to do with someone especially with an interpersonal professional development as well. Then you know: Okay this is normally how I react, this is part of my personality.” (P 7)*

Time management	<p><i>“I really don’t respect time and it is going to get me into trouble... Time management and I’ve been struggling till now... when they say the meeting is at 08:00 I feel like until it isn’t 08:00 I am not late... and then a minute before 8:00, I will be like: Oh yeah, I have a meeting in a minute.” (P 8)</i></p> <p><i>“I also had procrastination as a goal and I think it is not just with one thing but all areas of your life ... you always delay on doing anything until the last minute ... That helped me to make a decision by writing everything down and then saying: ‘Let’s do this.’ Being able to say: ‘This is the decision that I have to make,’ and going through the exercise, it helps you to come to a decision and you stick to your decision and you do it.” (P 1)</i></p>
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Table 4 above presented four themes and nine subthemes, all of which are discussed below.

### ***Theme 1: Conflict management***

The first theme that emerged was *conflict management*, which presented three subthemes that are expounded below.

*Empower*: One participant admitted that she would avoid managing conflict and were faced with a few conflict situations. She indicated that she felt the programme empowered her to deal with conflict in a mature way. Another participant mentioned that she did not think about conflict management as a skill, but at present was challenged to contemplate about it and how she handles it.

*Self-confidence* was identified as a second theme. P 9 admitted that she had the confidence to stand up for herself when she felt unhappy with the way she was treated. P 6 stated that the programme enabled her to speak up for herself and she developed a calmer approach to conflict.

*Problem solving*: Participants realised they are capable of resolving problems that they may encounter.

### ***Theme 2: Communication***

The second theme, *communication*, provided a single subtheme, *sensitivity to diversity*. P 8 shared his experience on the difficulty of language. He works in an environment that does not predominantly entail his first language and mentioned the frustration of not always being able to follow a conversation due to limited understanding of the language. However, he mentioned that the programme allowed him to develop the courage to acknowledge when he is lost with a conversation. In such cases he would approach the person and confirm in English whether he understood correctly.

### ***Theme 3: Interpersonal skills development***

*Interpersonal skills development* was also an identified theme, which presented five subthemes, which are expounded below.

*Maturity*: Participants developed a sense of *maturity*, which enable them to deal with certain uncomfortable situations. One participant recognised that she was taking responsibility for matters she was not supposed to and practiced to stop doing it.

*Self-confidence*: P 7 complimented P 6 since she witnessed the latter gaining increased *self-confidence* throughout the process, and learnt to speak up for herself and communicate loud and clear (“*Listen to the first focus group and it would be a much softer voice and now it is a confident voice.*” P 7).

*Other awareness*: Participants also acknowledged growth that took place in one another and witnessed their journey and progress (“*It is also amazing what this interpersonal skills sessions has done to her confidence.*” P 7).

*Self-awareness*: P 9 was under the impression that certain personality traits were damaging, but realised that it is just a personal characteristic and acceptable. The assessment of personality reassured participants that the way they reacted was normal and part of who they were. This helped them know and understand themselves better. The process of understanding oneself better, developed and participants were confronted with choices and perceptions (“... *had to deal with*

*explaining yourself to yourself ...*” P 5). Participants admitted that they were aware of certain traits or behaviours in themselves, but hearing it from another person or getting confirmation through a questionnaire made it a reality to them.

*Time management:* Certain participants had difficulties with time management and admitted that they tend to procrastinate. One explained that she tends to leave tasks to last minute, but started being proactive through planning. Another participant mentioned that he does not have respect for time, and the programme made him more aware of this weakness. He also revealed that he tried to manage his time better and succeeded, but after a while he began following his old routine.

#### **Category 4: Experiencing the methodology for the interpersonal development programme**

Different learning techniques work for different people. Therefore, feedback on methodology is important to ensure growth. During the second focus group discussion, the facilitator posed the question, “What was your experience of the method of presentation of the interpersonal development programme?” The themes and sub-themes capturing the responses are presented in Table 5 below.

Table 5

#### *Experience the methodology of the interpersonal development programme*

<b>Theme</b>	<b>Sub-theme</b>	<b>Response</b>
Writing reflection	Preference	<i>“I think the writing is maybe the biggest problem ... you don’t necessarily always go and write exactly what happened in a session or how you feel ... the thought was brilliant ... I personally don’t always do the writing reflection type of thing. Also, like P 8 said earlier, I would rather internalise and have conversations; it is less effort. I am an extrovert ... I will go and write but it won’t necessarily be a preference.” (P 7)</i>
	Positive	<i>“I enjoyed it, especially when you had to reflect back like when I read a couple of pages back what state of mind I was in at the time I was writing ... Some things I have managed to overcome and with some I am still battling with and working towards ... I think writing down something is actually helpful in a sense that you know that you have committed yourself like I would commit to saying: ‘I’m doing these things.’ and I try to work towards them because I have them written down.” (P 5)</i>  <i>“This whole experience I never thought that writing down things actually helps ... I thought it was a myth that you need to write something down ... I thought: How is this going to help? Because now nobody is going to know about it apart from me in this book, which can’t say anything to me ... Then I started writing and I was like: Okay, I will just write half</i>

a page. Then I would say: 'Okay, that is enough. I can't be pouring out my feelings and all on a piece of paper ... Later I was like: This is nice.' (P 3)

Teaching aids	Videos	"I like seeing things; I like visual aids so, if maybe the programme could like put somethings that we could do – maybe give us a video of a conflict and we just talk about it." (P 8)
	Scenarios and case studies	"Have a controlled discussion like you said you are imagining the worst-case scenario and I am just imagining something random. Then we have, we are trying to discuss the same thing but then it is different." (P 7)
Questionnaire	Feedback	"Even with the questionnaire, I tend to ask: 'Okay, what about this?' ... I consider stuff like: Okay well, this could've happened ... for me it is not possible to not overthink it. I can't... like am I in the workplace or if I am not in the workplace. It is different how I would handle it. If I have a conversation with my dad I wouldn't be professional like I am talking to my boss." (P 9)  "I know there is more to these questionnaires in a sense of feedback or so ... If you could also say ... 'There is this website where you can read more up on this, or: 'We actually have the complete breakdown for you about this.' That would be quite helpful because then you can go on your own time also and read through it ... So, the feedback sessions saying: 'Okay, these are your traits, little snippets but you can also go and read up on it there.' That might be quite helpful as well." (P 7)
Groups	Bonding	"I enjoyed the group ... the group setting worked well because we never have these kind of conversations ... it is so nice to hear what other people are struggling with and what the other interns are experiencing ... I think this is the most valuable thing for me the talking in the group." (P 2)
	Big vs Small	"I also think it wouldn't work as much if it becomes this big thing and it becomes this large group. Perhaps there will then be a little cut off on the number of people. I mean, if it is a large group you are not just going to stand there and be like: 'Okay guys, this is what is happening, I feel personally.'" (P 1)

The data presented five themes and several subthemes, as indicated in Table 5 above. These aspects are discussed below.

*Writing reflection:* The data indicated that certain participants felt they would rather reflect in other ways such as internalising instead of writing in a diary. They did not make the time to write and considered it more useful to have a conversation. A number of other participants felt that recording their reflection was a therapeutic process and experience; thus they began doing this more often.

*Teaching aids:* According to the data, there was a need for a further use of different visual aids during the sessions, for example *videos*. It was also suggested that the facilitator utilise more *scenario settings* and *case studies* to improve participants' practical understanding of content.

*Discussions:* Participants suggested that facilitators use scenarios and case studies during group discussions to ensure the members are on the same page. One participant might imagine the worst-case scenario while another imagines a normal situation. Having scenarios and case studies will ensure effective discussions. This will also guide participants to implement strategies more practically, helping them do it on their own in the future.

*Questionnaire:* The data revealed the need for feedback on the questionnaires. During the administration of the questionnaires, participants were uncertain from which perspective to complete it: work or personal life? There was a need for more information explaining the results. The one-on-one feedback sessions provided insight, but certain participants sought more information such as links, articles, and websites.

*Groups:* Participants preferred the group approach of the interpersonal development programme. They found it comforting to know that their peers are experiencing the same difficulties and are struggling with similar issues. A group setting helped create an environment conducive to learning. However, facilitators should be wary of groups overextending, which may lose intimacy.

### **Category 5: Recommendations for the interpersonal development programme**

The final category that was investigated was recommendations for the interpersonal development programme in the future. The purpose of this category was amending the programme to ensure its effectiveness. The themes and sub-themes that emerged from this category are presented in Table 6 below.

Table 6

#### *Recommendations for the interpersonal development programme*

<b>Theme</b>	<b>Sub-theme</b>	<b>Response</b>
Effect in practice	Personal growth	<i>“I have learned a lot through it ... I have learned a lot about myself about handling situations, yeah. ... It is nice that you can see yourself grow.” (P 9)</i>
	Boundaries	<i>“I think the thing ... that would be most valid for me in the future would be continuing with what I should start doing, stop doing, and continue doing, especially in the workplace. Setting those boundaries for me, like: This is not health for me to continue like this ... so maybe stop that ... basically I think that is a great guideline to have in a</i>

*professional environment to just retract and reflect and figure out; get perspective and get back in there with this new enlightened you.” (P 7)*

*“The one thing that I picked up that to say that: ‘P 3, you need to learn how to set the boundaries that when you are at work you are at work and when it is time to play, it is time to play, but the environment must be different.’” (P 3)*

	Self-confidence	<i>“With me, it was more of speaking up for myself. I have learned to speak up about things that should be done in order for me to develop as an intern to gain skills.” (P 6)</i>
Recommendations	Time	<i>“Maybe if the sessions could be constructed more closely together to each other because for me it was a problem that it was like a few weeks that go by and then it is the next one.” (P 9)</i>  <i>“I think to schedule the appointments before the time like: it is one thing to have the paper and we have the dates and I scheduled them with myself but because it just makes it so much easier if someone says: ‘Hey next week at two to say I have something there because I am not going to remember maybe the 17th of April but Facilitator I will let us know. It is nice to have concrete it is already in your diary.’” (P 2)</i>
	Induction	<i>“... because it was nice but it is like it came too late. If you could do it before you go into the workplace or start working at a new place, or something like that.” (P 6)</i>
	Support	<i>“What is also nice: you are not just complaining about something. You actually learn how to deal with it.” (P 9)</i>
Preparation for working with mentor		<i>“... especially working with a mentor or boss, or something. It is nice to know what you have to stop doing, what you have to start doing ... I also think it is smart to keep the feedback session to a second session after the introduction because in that sense you also have the confidence to know each other because automatically you are going to be automatically honest with your feedback with them. So automatically you break down those barriers” (P 9)</i>  <i>“Get the mentors maybe first because I think that is what’s different ... my mentor has a lot of respect for this ... so I would just say: ‘I got that NRF thing’ ... I can say that because she would never say no because she kind of bought into the thing. I think that is different if we could get the mentors first or get a session with the mentors and the interns right from the start, saying: ‘This is the plan,’ and ask the mentors the same goals that we had on the walls. The mentors: are you fine with this for 6? And it is non-negotiable, and schedule the sessions with the mentors as well.” (P 2)</i>
	Re-cap	<i>“I can’t think of anything missing in terms of content but I would have enjoyed feedback or like doing conflict management and then talking about that at the next session like ... not have the session and there you go ... actually being able to say: ‘Well okay, I thought about this.’ And now, after the session, like this like: what we do in our journals but I would have liked to have the opportunity to discuss.” (P 2)</i>
	Homework	<i>“For every session maybe if you gave us like an activity to do just like the feedback went to the mentors and asked for feedback. That was like ... an actual activity to see if we are implementing what we were discussing prior and if it works or if it doesn’t ...</i>

*So, maybe for every session ... give us some sort of activity so that we practice and see how far we can go.” (P 5)*

The data in Table 6 above presented two themes and nine subthemes about recommendations for the interpersonal development programme.

### ***Theme 1: Effect in practice***

The first theme indicated three subthemes:

- *Personal growth:* It was confirmed that the interpersonal development programme encouraged and orchestrated personal growth. Participants developed self-awareness and their ability to grow.
- *Boundaries:* The programme enabled participants to set boundaries for themselves, thus limiting unwanted behaviour. Participants also learned to set boundaries between their work- and personal life, and understood how they should conduct themselves between these two spheres.
- *Self-confidence:* The programme inspired participants to speak up for themselves and identify what needs to happen in order for them to develop personally and professionally.

### ***Theme 2: Recommendations***

The second theme delivered six sub-themes:

- *Time:* It was suggested that sessions should be constructed closer together instead of once a month. Appointments can be scheduled in advance to avoid conflict of events.
- *Induction:* Participants proposed that the interpersonal development programme should form part of an induction at the beginning of their internship year. A further idea was to facilitate more sessions where participants get to know each other and break away from their work environments.
- *Support:* The interpersonal development programme is focused on solutions; thus, participants learn how to deal with the issues they are experiencing. This is indicative of acting on experience instead of talking about it.

- *Preparation for working with a mentor:* Participants mentioned that incorporating mentors in the development programme will enable interns to receive feedback on their professional development. This means obtaining buy-in from mentors to ensure their commitment to participants' growth. It will also ensure participants attend all scheduled sessions and are not expected to perform other tasks during that time.
- *Re-cap:* Participants considered it useful to review topics covered in previous sessions at the beginning of each new session. This will give them the opportunity to pose questions that may have emerged during reflection.
- *Homework:* It was advised to include self-study and homework in the programme. Participants must be given a chance to implement in practice what they have learnt during the sessions and determine its feasibility for themselves.

## **Discussion**

The overall objective of the present research study was to evaluate an interpersonal development programme for science, engineering, and technology NRF interns located at a tertiary education institution. The study found that the mentioned graduates had limited knowledge of interpersonal skills and how it impacts most aspects of their lives and careers. As a first step a needs analysis was done, which showed that participants perceived interpersonal skills as a phenomenon growing from experience, whereas others considered it a skill that could not be taught or learnt.

The overall experience of the development programme for interpersonal skills was positive and empowering. Participants felt more equipped and comfortable to deal with difficult and challenging situations, both personal and professional. The development programme helped participants get to know themselves better and reflect on certain aspects of their lives where needed. The interpersonal development programme covered several important topics. These were: giving and receiving feedback; self- and other awareness; conflict management; and personal-growth initiative. The general objective was broken down into four specific objectives, which are discussed below.

### ***Objective 1***

The *first* objective of the research study was to explore how an interpersonal development programme, specifically for science, engineering, and technology interns, were conceptualised within literature. Personal development is a self-directed learning instrument that encourages individuals to take responsibility for their own development (Beusaert et al., 2011a; Lyons & Evans, 1997). Human beings are likely to face and experience adverse and challenging situations that necessitate change in the way they approach and handle such circumstances and issues (De Freitas, Damásio, Tobo, Kamei & Koller, 2016). These essential changes can be initiated through various methods and instruments, including personal development. Beusaert et al. (2011a) indicate that personal development can be used for either promotion and selection, or for personal learning and development. There are three central questions that individuals should ask themselves when participating in personal development initiatives: Where am I now? Where am I going? and Where to go next? (Beusaert, Segers, Fouarge & Gijssels, 2013).

Literature commonly shows that training in personal development means developing self-knowledge and self-awareness, and engaging in reflective processes to determine who one is and what one wants to be (Andersson, 2010; Andersson, 2012). Studies found that soft skills needed by engineering students, include communication, problem solving, team work, self-learning, empathy, and understanding (Backlund & Sjunnesson, 2012; Berglund & Heintz, 2014; Grant & Dickson, 2006; Gruba & Al-Mahmood, 2004; Tong, 2003; Woratschek & Lenox, 2002). Research focusing on science and technology students, mentions similar important skills (Brown, Lee & Alejandre, 2009; Carter, 2011; Coll & Zegwaard, 2006; Harris & Rogers, 2008; Pineteh, 2012).

### ***Objective 2***

The *second* objective was to determine the content and methodology of an interpersonal development programme specifically for interns at a tertiary institution. First, a needs analysis was done amongst the participants to capture their opinion on what should be included in such a programme. The findings indicated four main topics that the participants identified as needs, which correspond to literature and thus was confirmed as relevant matters to include in the programme.

*Giving and receiving feedback:* Nicol, Thomson and Breslin (2014) state that feedback is a difficult and complicated issue, but an essential part of learning. Certain participants experienced the feedback sessions as positive and empowering, while others had a negative view and experienced it as disastrous. This finding is in accordance with that of Nicol et al. (2014) that in certain situations, feedback continues to be disappointing. Keenan (2017) provides helpful guidelines for effective feedback: i) given in a safe environment; ii) about recent behaviour; iii) very specific, and about changeable matters. Nash and Winestone (2017) further state that feedback is most efficient when it entails a two-way conversation between parties.

For feedback to be included in a training programme for interpersonal skills, it is recommended that principles and guidelines of sound feedback should be included.

*Self- and other awareness:* The findings showed that the participants viewed self-awareness to be a necessary part of a training programme in interpersonal skills. Cherniss and Goleman (2001) define self-awareness as a deep-set understanding of one's own weaknesses, strengths and motivation. In this regard, research found that self-awareness and personal development are intertwined and inspire learning (Andersson, 2010; Foster & Lloyd, 2007; Senge & Kim, 1997).

Studies also indicate a positive correlation between self-awareness and leadership success (Ashley & Reiter-Palmon, 2012; Goleman, 2004; Leary & Buttermore, 2003; Rubens, Schoenfeld, Schaffer, & Leah, 2018; Sturm, Taylor, Atwater, & Braddy, 2014). Naturally, analytical skills and intellectual intelligence are important. Nevertheless, crucial for relationship building and leadership, is individuals' ability to identify and manage their own emotions, and respond to the needs of those around them (Rubens et al., 2018).

Topics presented in the present research resonate those by a study conducted at the University of Dublin where a personal development programme was presented to enhance the employability of graduates. The University of Dublin developed their programme based on generic skills that are crucial across all industries, where the objectives were: knowing yourself, decision making, goal setting, and action planning (University of Dublin, 2014).

*Conflict management:* Certain participants admitted at the beginning of the programme that they would avoid conflict rather than manage it; thus, they would prefer such a topic included in the training programme. Conflict can be perceived as inherent to human condition, thus making it inevitable (McKibben, 2017). Prause and Mujtaba (2015) further emphasise the importance of conflict management: “Today’s workplace is a melting pot of diverse cultures which cause new grievances to the managers and has increased the requirements for conflict management techniques.” (p. 13).

Generally, conflict is defined in terms of an interpersonal disagreement, a difference in opinion, lack of communication, role expectations that are poorly defined, dispute concerning two or more individuals, perceptions that are negative, or competition (Ellis & Abbott, 2012; Marquis & Huston, 2009; McKibben, 2017). According to Rahim (2017), conflict can result in job stress, burnout, damaged relationships, reduced communication between groups and individuals, and a climate of suspicion and distrust. McKibben (2017) furthermore points out that should conflict not be managed properly, it has numerous detrimental consequences. These include: distrust, damaged relationships within teams, inadequate communication and reduced function. One participant admitted that she used to work longer hours to accommodate everybody instead of managing the conflict.

Conflict can have both negative and positive outcomes associated with effective management. Conflict situations generate alternative solutions to problems, it inspires change, creativity and innovation, and may enhance performance (Rahim, 2017). The same participant that avoided conflict at the beginning of the programme felt empowered to approach these situations and was able to provide examples of where she managed it effectively. Conflict management seem to form an important part of interpersonal skills judged by the Learning Company (2018). In a programme developed by the authors, one of the modules dealt with conflict management. The module entailed: understanding your own conflict handling style; identifying conflict resolution strategies; and a practical session where individuals practise the handling of conflict situations (The Learning Company, 2018).

*Personal-growth initiative:* The participants indicated that they need a type of guideline to assist them when trying to adapt to changes. They stressed that as individuals, they live in a complex world where the only constant is change and people must be able to adapt. An individual's ability to initiate a process for deliberate change can be described as a personal- growth initiative (De Freitas et al. 2016). Robitschek (1998) explains that personal-growth initiate takes place when an individual initiate personal change, which promotes positive personal development.

During the research study, it became evident that this personal-growth initiative enhanced participants' development of interpersonal skills, seeing that they initiated changes in their own lives. Therefore, participants mentioned that they were able to achieve their goals by carefully considering the process and breaking it down into straightforward steps. Personal- growth initiative seems to be an important skill for students since it has been explored in various studies in industrial psychology (de Jager-van Straaten, Jorgensen, Hill & Nel, 2016), including master's (Meyers, Van Woerkom, de Reuver, Bakk & Oberski, 2015), as well as other post-graduate studies (Sharma & Rani 2014).

The main supervisor provided the researcher with an existing development programme, which already included self- and other-awareness and the personal-growth initiative. The researcher adjusted and modified the existing programme with the topics identified in the needs analysis. This resulted in the newly development programme which included four topics, namely: *giving and receiving feedback; self- and other-awareness; conflict management; and personal-growth initiative*. Participants also had to write down in their reflection journals what they have learnt after each session.

The research study employed adult learning as part of its methodology. This form of learning is also known as andragogy and is based on several assumptions (Knowles, 1995; Palis & Quiros, 2014). Adults first want to know why they must learn something new and how it will add value to their lives (Knowles, 1995; Palis & Quiros, 2014). Therefore, a needs analysis was done to help participants themselves identify what they need to develop. Adult learners are capable of becoming self-directed learners able to adjust, control, supervise, and motivate their own learning (Knowles, 1995; Palis & Quiros, 2014). The facilitators' role is to make participants aware of the mentioned

capabilities. Adults have accumulated experience that they introduce into the learning environment but also mental biases, habits, and assumptions that must be overcome to make learning effective (Knowles, 1995; Palis & Quiros, 2014).

The interns who participated in the present study, were graduates and formed part of the workforce at a tertiary education institution. Introducing case studies, group discussions and scenarios as part of sessions may challenge participants to evaluate, reflect and review their own experience of the topic being taught (Palis & Quiros, 2014). An individual's readiness to learn and acquire orientation plays a major role in adult learning (Knowles, 1995; Palis & Quiros, 2014). Adults will learn effectively if the learning content is applicable and relevant to their real-life experiences (Knowles, 1995; Palis & Quiros, 2014).

### ***Objective 3***

The *third* objective of the study was to determine how the population experienced the programme for interpersonal development. The findings indicated that participants felt empowered after undergoing the programme (Louw, 2007). Participants were able to conceptualise and apply solutions for problems they were experiencing instead of ignoring or avoiding these issues (which they did on previous occasions). It was perceived that the participants felt more self-confident to voice their problems and issues, approach problem-solving, and became more aware of themselves and others. These findings are in line with those of Louw (2007) where participants felt that the programme helped them develop a deeper understanding of themselves and equipped them to cope better with the difficulties they face (Louw, 2007). Researchers have found that a participative empowering environment can be associated with increased levels of knowledge, awareness, self-esteem, self-confidence, perceptions of control, efficacy, critical thinking, and development of positive attitudes (Kieffer, 1984; Lord & Hutchinson, 1993; Schulz, Israel, Zimmerman & Checkoway, 1995; Sibthorp & Arthur-Banning, 2004).

Participants were able to recognise development and growth in each other, which indicates improved awareness of other people. They displayed confidence and maturity when faced with sensitive or uncomfortable situations, by applying their interpersonal skills. The programme encouraged a participant to be more vocal about her thoughts and approached her supervisor to ask

for feedback. According to Bandura (1994), individuals will be more likely to remain actively involved with their goals if they receive positive feedback on their capability.

Participants had negative perceptions about certain of their personality traits and classified these aspects as either “good” or “bad”. The session conducted by the programme facilitator consisted of psychometric personality assessments along with the individual feedback. This session informed participants that there are no “good” and “bad” personality traits. Laney, author of *The introvert advantage: How to thrive in an extrovert world*, explains that introverts are often misunderstood, not only by those around them but also by themselves (2002).

One participant admitted that she enjoyed the development programme but confessed that it was not that easy a journey and challenging at times (*“It was challenging to me because ... I can’t just be efficient now; I have to think about who am I being efficient for and why am I being efficient.”* – P 1). The same participant disclosed that she would not have participated in such a development programme on her own initiative or if the researcher did not approach her, however, she did not regret participating in the end. Another participant experienced the programme as enlightening. She confirmed that she has learnt several new aspects about herself, which also validated what she already knew. Studies found that utilising one’s strengths, could result in improved self-esteem, satisfaction with life, and psychological wellbeing (Elston & Boniwell, 2011; Minhas, 2010).

The general experience of the participants was positive and empowering. They felt the programme enabled them and provided insight. However, when participants were asked whether they would have participated in a development programme without being approached by someone, most answered in the negative.

The study also investigated how this specific population experienced the methodology. Evaluating the experience of content can deliver a few challenges, therefore it is important to remember that the participants’ experiences are reported on. Participants were encouraged to reflect on these experiences by writing in a diary throughout the programme. While certain participants experienced writing down their thought as insightful and helpful, the idea did not appeal to others

“... personally don't always do the writing reflection type of thing ... I would rather internalise and have conversations; it is less effort. I am an extrovert ... I will go and write but it won't necessarily be a preference.” – P 7). Nevertheless, research shows that reflection plays a major part in learning (Reid, Bimrose & Brown, 2016).

The findings of the present study also indicated a need for more discussions and visual aids. Video clips are a valuable teaching technique that helps facilitators focus individuals' attention on constructs of interests or on specific sets of skills (Bedwell, Fiore & Salas, 2014; Scherer & Baker, 1999). Such video aids are deemed effective since it enables the facilitator to demonstrate easily and unambiguously the ineffective and effective utilisation of a specific skill (Bedwell et al., 2014; Shabiralyani, Hasan, Hamad & Iqbal, 2015). This provides a sensory learning environment that helps learners retain and understand information better (Boateng, Boateng, Awuah, Ansong & Anderson, 2016). Integrating visual aids with content in learning has a positive impact and helps make the learning process real, vital, and active (Mathew & Alidmat, 2013; Shabiralyani et al., 2015). However, Mathew and Alidmat (2013) point out that learners only find visual aids relevant and useful if there is a direct link to the course content.

During the programme, participants administered psychometric assessments and indicated that they would have preferred more information on these assessments and what it entail. Adults are encouraged by their own agendas and motivations for learning. Thus, if they associate with the purpose of learning they will become engaged in the process. Adults' need for learning is related to their everyday lives as well as the specific roles and practices they face. If learning can help adults deal with difficulties they experience, they will commit to the process (Tusting & Barton, 2003). Therefore, it is important that the facilitators clearly state the purpose of each topic and session during the development programme to ensure participants are informed fully.

### **Limitations and recommendations**

Although the present study contributed to the particular field of research, certain limitations were identified. *Firstly*, the number of interns were less than expected. During the planning phase of the study, the tertiary education institution typically received approximately 18-20 NRF interns per annum. However, when the study commenced, there were only 10 interns in total, who were all incorporated in the study. *Secondly*, although supervisors were informed beforehand about the

interpersonal development programme, not all of them prioritised attendance or informed colleagues of their attendance. *Thirdly*, a few participants missed sessions due to conflicting events; personal sessions had to be scheduled with them to catch up on a session. The group of interns available for the study were small, and the facilitator was able to accommodate those who missed sessions, however if a group were to grow larger, this may become a problem. *Finally*, participants failed to inform the facilitator that a different time during the day would suit their schedules better. Since work in the laboratory must take place before a certain time in the day, this made their schedules inflexible to an extent.

#### ***Objective 4***

The *final* objective of the present research study was to make recommendations for future research on a programme to develop interpersonal skills. Based on the findings, several suggestions were made that could be followed up. *Firstly*, such a programme should be presented before individuals enter the workplace; thus it should form part of an induction programme. *Secondly*, sessions should be scheduled more closely together and ahead of time to prevent conflicting events. *Thirdly*, the mentors to whom the interns were allocated should form part of the programme for interpersonal development and provide more support during the process. *Finally*, Beausaert, Segers, Van der Rijt, and Gijsselaers (2011b) recommend that individuals should be supported throughout their journey of personal development in a noncontrolling way that will empower them. Participants' readiness for change plays a crucial role in the success of an interpersonal development programme. The outcome of such a programme can be improved by clearly communicating the purpose and how participants would benefit from it.

#### **Practical implications**

The aim of this research study was to explore and evaluate how science, engineering, and technology interns at a tertiary education institution experienced an interpersonal development programme. The research involved interns participating in an interpersonal development programme while completing their NRF internship at a university. At the end of the interpersonal development programme, participants were given the opportunity to provide feedback on their experience and make recommendations for such a programme in future. The findings of the present study can inform the development of similar programmes for science, engineering, and technology

populations. After undergoing this development programme, NRF interns will also finish their internship with a new set of valuable soft skills that will empower them and may make them more employable.

## **Conclusion**

Interpersonal skills and its importance have become a popular topic among researchers and employers alike (Anderson, Their & Pitts, 2017). A programme for personal development is a practical and useful tool to address the development of crucial skills, however, to date, such a programme is underutilised. The value added though programmes to help develop interpersonal skills is significant, however, findings show that it is challenging getting individuals to participate in such a programme. The present study focused on the implementation and evaluation of such an interpersonal-skills-development programme specifically targeting the needs of science, engineering, and technology interns at a tertiary education institution. Participants reported that they found the development programme to be empowering, insightful, and valuable for their own personality and a planned future career.

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## **CHAPTER 3**

### **CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS**

## Conclusions, limitations, and recommendations

The conclusions of the present research study are presented in this chapter. The conclusions to be discussed are aligned with the research study's general and specific objectives. This chapter also acknowledges the limitations of the research study and provides recommendations for future research and practice.

### 3.1. Conclusions

The general objective of the study was to evaluate an interpersonal development programme for NRF interns studying science, engineering, and technology at a tertiary education institution. Figure 2 below provides an overview of the categories and themes, relating to the categories, as they were identified from the data in the study.

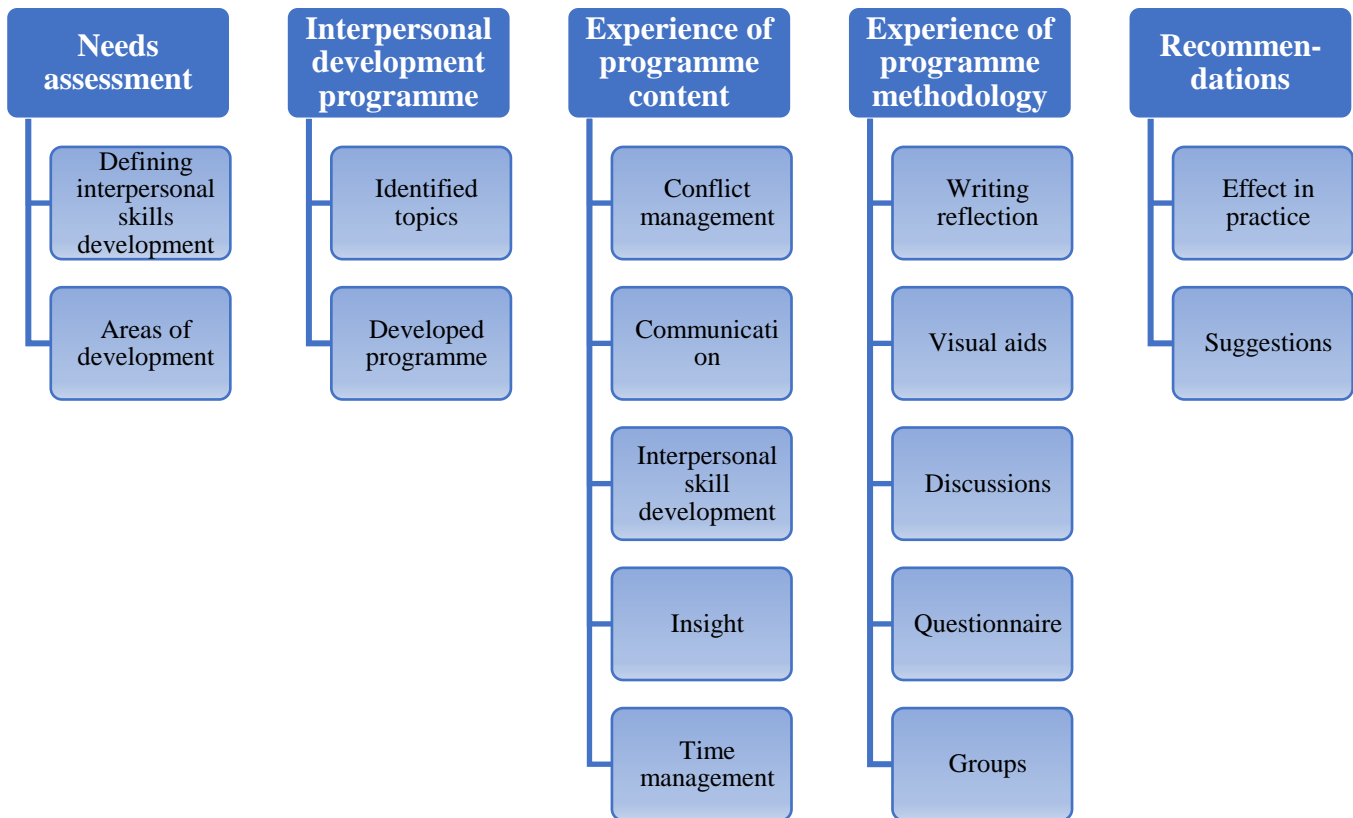


Figure 2: Illustration of research categories and themes

Subsequently, the findings are discussed briefly, in accordance with the research study's specific objectives.

***Specific objective 1: Explore how an interpersonal development programme for science, engineering and technology interns is conceptualised within the literature***

The first objective of the present research was to investigate how key terms of the study are conceptualised and defined in literature. The UK College of Personal Development (2015) defines personal development as the mindful pursuit of personal growth by improving personal skills and increasing self-knowledge and awareness. This includes the development of a healthy and realistic self-esteem as well as positive life skills (Berger, 2005).

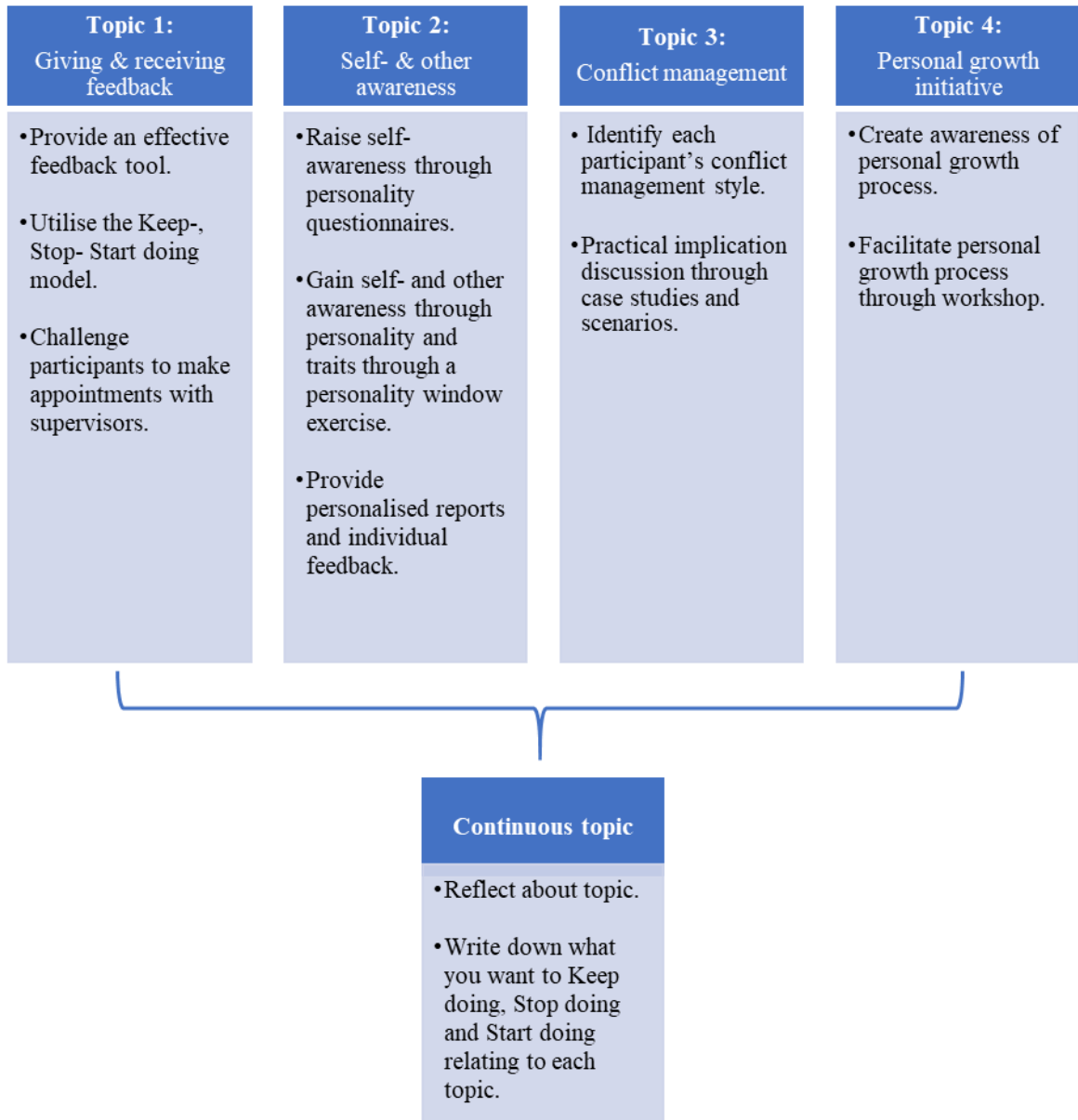
Literature further indicates that industry began to realise the importance of interpersonal skills and that most graduates fall short even though they meet the technical skill requirements (Bedwell, Fiore & Salas, 2014; Cottrell, 2015; Deming, 2017; Lu-Myers & Myers, 2018; Wesley, Jackson & Lee, 2017; Yu, Brown, White, Marston & Thyer, 2018). Interpersonal skills range from effective communication and conflict management, self-awareness and flexibility, to adjustment to change (Whitehall, Hill, Yost & Kidwell, 2018). Cerezo-Narváez, Ceca and Blanco (2018) list the interpersonal skills that are highlighted most. These are teamwork, communication, conflict resolution, problem solving, self-reflection, critical thinking, and self-management.

According to Fahnert (2015), graduates should be able to work in a team, communicate clearly, show self-confidence, manage time effectively, and be adaptable. Even though some graduates are aware of this desirable interpersonal skillset, very few can present these abilities (Fahnert, 2015). In this regard, a personal development programme plays a significant role as instrument that can be utilised to develop the necessary interpersonal skills (Beusaert, Segers & Gijsselaers, 2011).

***Specific objective 2: Investigate what the content and methodology of an interpersonal development programme entail for a specific population of interns at a tertiary institution***

This objective was to identify the specific topics that should be included in an interpersonal development programme for science, engineering, and technology interns at a tertiary institution. The researcher held a preliminary focus group session with the interns to identify their specific

interpersonal development needs. Once key themes and topics were identified, the researcher constructed a development programme. Topics relating to the content of the programme are illustrated in Figure 3 below:



*Figure 3: Interpersonal development programme*

At first, the researcher observed that participants had limited knowledge of interpersonal skills and the ways in which it can be acquired or developed. However, as the focus group session continued,

they showed improved cognition. Participants indicated that they often find conflict management difficult; thus, it should be addressed in the programme (Prause & Mujtaba, 2015). The researcher included the topic *feedback* in the programme since participants were willing to learn and develop but required assistance to identify specific areas of development (Han & Yang, 2017). The *personal growth* topic was incorporated into the programme to provide participants with a practical guide on approaching change and breaking it down into smaller steps to ensure progress and success. Self-awareness is important for personal development as it refers to individuals' understanding and knowledge of themselves regarding worldviews, values, life experiences, and beliefs (Pieterse, Lee, Ritmeester & Collins, 2013).

After the programme was implemented and interns provided feedback regarding their experience of the programme, the researcher compiled the following model of how sessions could be presented, certain key themes were identified as outlined in Figure 4 below.

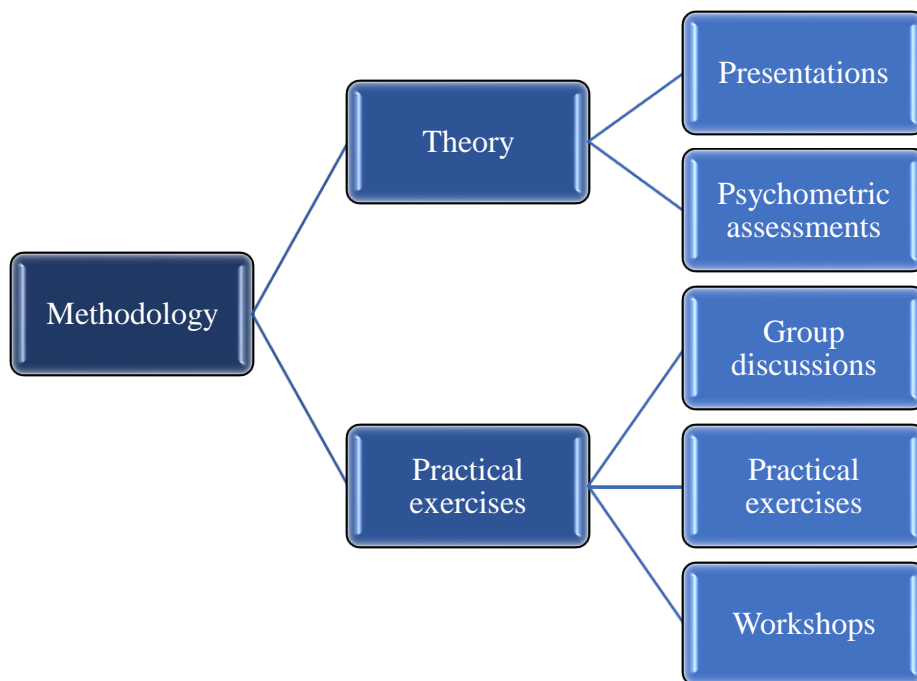


Figure 4: Methodology of interpersonal development programme

Participants indicated that they prefer interactive sessions where they can discuss issues and topics practically. One participant emphasised that she learns best when she is challenged and taken outside her comfort zone.

***Specific objective 3: Determine the experience of the population after the interpersonal development programme***

The overall experience of the interpersonal development programme was positive. Participants felt empowered and equipped to deal with challenging and demanding situations. They felt they had sufficient confidence to stand up for themselves and change situations with which they were not pleased. Some admitted that the development journey was not easy-going, but eventually was worth the effort. The group members were also able to commend each other on their growth and progress, which demonstrated other-awareness.

Several participants found it beneficial to reflect by writing in their reflection journals about each session afterwards, although initially they found the idea strange. Conversely, a number of participants preferred different forms of reflecting but did not elaborate on these methods. Reflective learning is fundamental to personal development, seeing that individuals continuously reflect, plan, implement, and review aspects they want to change or develop (Queen's University Centre for Educational Development, 2015). Reflection is considered as a central characteristic of effective learning by encouraging individuals to revisit concrete past experiences and re-think what has taken place (Kolb, 1984; Lejeune, Mercuri, Beusaert & Raemdonck, 2016; Tigelaar, Dolmans, De Grave, Wolfhagen & Van Der Vleuten, 2006).

At the beginning of the research study, the researcher contacted targeted individuals with an invitation to participate in the study. When participants were asked afterwards if they would have participated in a development programme without being contacted by the researcher, they responded in the negative. Research have found that if people voluntarily participate in initiatives for personal development, it leads to increased development (Beusaert, Segers, van der Rijt & Gijsselaers, 2011; Smith & Tillema, 2001). Literature suggest that individuals who are highly self-directed readily identify development opportunities and persevere in learning, whereas those who

are less self-directed in learning often fail to recognise and seize learning opportunities (Lejeune et al., 2016; Seibert, Kraimer & Crant, 2001).

### 3.2. Limitations

Although the research made clear contributions to the study field, certain limitations must be pointed out.

Firstly, the tertiary education institute selected for the present study, hosts a different number of interns each year, determined by the number of NRF applications and hosting institutions. Thus each year the size of the group and number of participants will vary, making it difficult. If groups are too small organisations might reconsider committing time and resources to the programme. If the groups are too big it might affect group interaction and take longer to create a safe-space as everyone needs to get comfortable with each other.

Secondly, even though participants and facilitators agreed and committed to a set of group rules and values these delimitations were often bridged. Participants often arrived late for sessions and some did not show up without informing the facilitator. The group of participants was small and it was easy to brief members individually when a session was not attended. However, if a similar programme should be upscaled to a larger group of participants it may become challenging to accommodate participants individually who fail to attend at times.

Finally, readiness for change plays a crucial role determining the possible impact of such a development programme on a participant's life. Individuals may participate in a development programme without being ready to commit to the necessary behaviour changes, thus resulting in minimal growth. This matter is addressed in more detail in the recommendations below.

### 3.3. Recommendations

The recommendations below are linked to the final objective formulated for the research study. These will be discussed from the researcher's experience and perspective as well as based on feedback from participants.

#### *Specific objective 4: Determine what recommendations can be made for research in the future*

As part of the final objective, participants were asked to provide the facilitator with honest feedback and suggestions to enhance the interpersonal development programme. The recommendations is divided into two sections, general recommendations and those focusing specifically on the development programme.

#### *General recommendations*

**Supervisor engagement:** Buy-in from supervisors who are assigned to interns are crucial. Supervisors were contacted telephonically and informed about the development initiative. During the time of the programme, it was clear that certain supervisors were committed and ensured that their interns attended the sessions. On a few occasions interns had to cancel their attendance on the last minute due to conflicting events arranged by their supervisors. Beusaert, Segers, van der Rijt and Gijsselaers (2011) mention that individuals who are supported throughout their development journey showed better growth. Even though individuals play a central role in their own learning, true learning will take place only if they are supported by leadership (Lejeune, Mercuri, Beusaert & Raemdonck, 2016; Sibarani, Tjakraatmadja, Putro & Munir, 2015).

Based on the results from the present research, it is recommended strongly that a face-to-face meeting should be arranged with the supervisors involved. During this meeting the researcher should inform supervisors about the need and purpose of the developmental programme as well as its foreseen impact in the workplace. This will also give supervisors the chance to raise their concerns and make suggestions based on their past experiences when working with interns. This collaboration will ensure the development programme focuses on needs of both supervisors and interns, which will ultimately benefit all parties. Supervisors can form part of the participants'

development journey by attending certain sessions and participate alongside interns in some of the activities. The facilitator can also set up a mid-term evaluation with interns and supervisors to monitor their progress respectively, and ascertain whether new needs have arisen as their self-awareness improves.

**Multiple sessions:** For the present study, the researcher scheduled a single session per month, but participants felt that sessions could be scheduled more closely together to deliver more than one session per month. The programme sessions can be scheduled to cover more than one topic during such a month. However, it is important to remember that these sessions take place during working hours. Working schedules and workload may not allow interns to be absent from work this frequently for development. The phrase ‘time is money’ is a reality for organisations and management can usually only afford training for a couple of hours or days (Vaida, 2015). Nevertheless, it is important to keep in mind that if training takes place over a longer period, it will deliver improved results (Taylor, Russ-Eft & Chan, 2005; Vaida, 2015).

An alternative option could be to host a two-day development programme covering the topics. Participants will still receive assignments to be completed afterwards. The facilitator will schedule periodic refresher sessions and be available for follow-up and assistance. Arranging a two-day programme would definitely minimise limitations experienced in the current study. These involve participants’ commitment, arriving late for sessions, and interfering working schedules.

**Induction ‘package’:** It was suggested that the development sessions could form part of an induction ‘package’ at the tertiary institution. The purpose of an induction programme is to familiarise newly employed individuals with the processes and setup of an organisation (Brannigan, 2016). It is custom to identify objectives and skill gaps at the beginning of an induction programme (Brannigan, 2016), however it is easier to identify deficiencies in technical skills rather than soft skills. Organisations could benefit from including personal development as part of the induction programme since it may save time. However, it is important to keep the purpose of the development programme in mind. This research study aimed at designing an interpersonal development programme based on the participants’ needs. Participants first need exposure to the working environment in order to identify aspects they would wish to develop.

**Self-directed focus:** As mentioned previously, an individual's readiness for change determines the value and outcome of a development programme. Literature also indicated that highly self-directed individuals are more adept at identifying and utilising learning opportunities (Lejeune et al., 2016; Seibert et al., 2001). Individuals may not be self-directed due to a lack of relevant skills, knowledge, experience, self-confidence or motivation (Grow, 1991). In order to empower participants, helping them become more self-directed, it is crucial to highlight purpose and a deeper self-concept. Such empowerment will thus incite enthusiasm and cultivate a sense of direction (Grow, 1991). The existing development programme already includes topics that promote self-awareness and self-understanding but would benefit by focusing more on purpose. It is recommended that the first part of the development programme should focus on cultivating highly self-directed individuals and the second part on changing behaviour.

#### *Programme-specific recommendations*

During the programme, the researcher covered one topic per session: giving and receiving feedback; self- and other awareness; conflict management; and personal growth initiative. Thereafter, group members were encouraged to reflect on these topics, which also concluded the session.

**Topic review:** Participants suggested that for a next session, time should be allocated to recap the previous topic and discuss new insights and questions. It was also recommended that homework should be given at the end of each session. Homework would help participants test their understanding of the specific topic and elicit questions to enhance their understanding and implementation of the initiatives.

**Practice learning:** Participants mentioned that it would be useful if the sessions included more practical exercises such as scenarios and case studies. According to Shaw, Janssen, Barnett, Nicholson, Avery, Heneka and Phillips (2018), case-based scenarios as part of development, help promote authentic learning experiences relevant to practice. It is crucial that the scenarios and case studies, used for learning purposes, are relevant to real-world experiences and allow opportunities for reflection and discussion (Shaw et al., 2018). Tayem (2013) found that case-based learning was

an effective tool and improved students' learning and analytical skills. Sound scenarios and case studies can be developed based on collaboration with supervisors and the needs analysis of participants. This will ensure the developed content is applicable and specific for the target group.

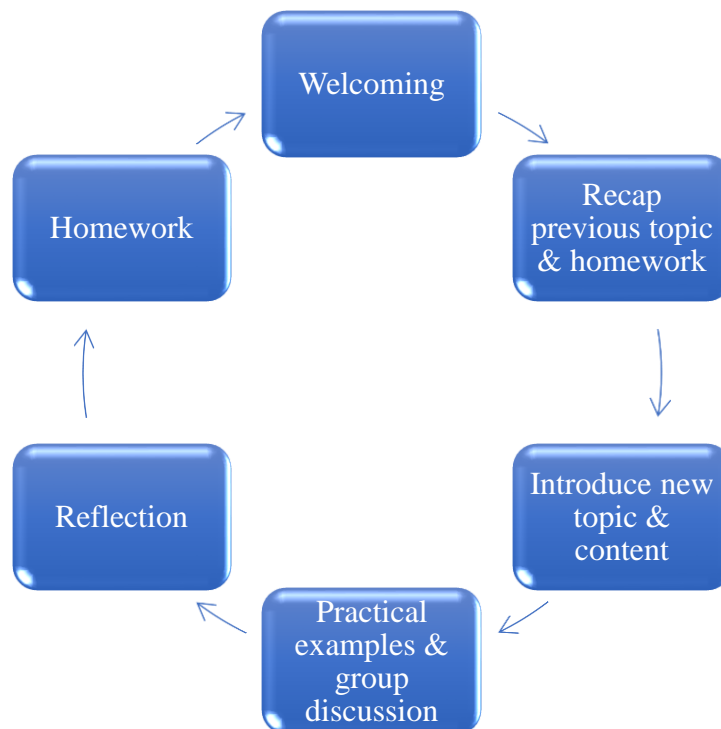
**Homework assignments:** It was also recommended that homework be assigned to participants at the end of each session to help inculcate the topic and content. Homework is a practical way of testing individuals' understanding of content, however the purpose is important. Therefore, attention should be paid to the purpose of homework and it should be communicated clearly to ensure group members perceive it as meaningful and useful (Rosário, Núñez, Vallejo, Nunes, Cunha, Fuentes & Valle, 2018). Based on the information above, it is recommended that case studies and scenarios should be incorporated for discussion during sessions. Furthermore, participants should be provided with homework assignments to be completed for the following session. These assignments could be based on the case studies and scenarios covered during the session.

**Group experience:** Participants also felt that such a development programme should be presented in groups to encourage group discussions. The group sessions created a safe space for participants to verbalise issues and hardships that they were experiencing. During the group discussions, it also became apparent that several participants have to deal with similar issues and challenges. As a result, participants' had a sense of belonging to the group, which ultimately created a safe supporting space for the members. Group-based learning makes room for positive peer support, increases participants' motivation and engagement, as well as improves collaboration and communication skills and the ability to function effectively in a team (Tayem, 2013; Willman, 2018).

**Reflection time:** The researcher briefly explained the importance of reflection at the beginning of the programme, however failed remind participants constantly. For most individuals, reflection is not a natural activity and needs to be practiced over time. However, Anseel, Lievens, and Schollaert (2009) found that in order for behaviour to change, individuals have to reflect on past experiences. Therefore, more time should be invested in explaining the purpose and process of reflection as well as its impact on development and awareness. Instead of reminding participants

to reflect in their own time, the facilitator should create this opportunity during each session. Prioritising reflection during sessions will eventually cultivate this habit on a continuous basis. The facilitator should also expose participants to different ways of reflecting. This will allow them to identify a reflection method that compliments their learning.

The recommendations above led to the creation of a new outline for each session, as presented in Figure 5 below.



*Figure 5: Outline for sessions*

**Comprehensive focus:** Finally, it is recommended that future research should investigate and determine the interpersonal skill needs of interns on a larger scale. This will enable researchers to establish whether there are universal similarities based on these perceived needs. A ‘one-size-fits-all’ intervention programme can then be designed and implemented at the beginning of internships to train basic interpersonal skills.

## **Conclusion**

Remaining employable in the fast-changing world of work is a large challenge. Programmes to develop interpersonal skills, provide individuals the opportunity to hone and ply these crucial skills. The purpose of a development programme should be communicated clearly and continuously thus, making sure participants commit to the development process. Individuals were provided time and the opportunity to invest and believe in themselves, to ponder about their future, and to realise and develop their potential. Ultimately, such a development programme will deliver interns with a mindset of continuous learning, self-awareness and an edge that will differentiate them from others.

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**ADDENDUM A**

**INFORMED CONSENT**



NORTH-WEST UNIVERSITY<sup>®</sup>  
YUNIBESITHI YA BOKONE-BOPHIRIMA  
NOORDWES-UNIVERSITEIT

## RESEARCH PARTICIPANT'S CONSENT FORM

**Research participant is required to complete all information on the form. All given information will be treated as confidential.**

**Surname:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Gender:**

Female	Male
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**Race:** \_\_\_\_\_  
\_\_\_\_\_

**Date of Birth:** \_\_\_\_\_

**Highest Qualification:** \_\_\_\_\_

**Home Language:** \_\_\_\_\_

**Education Language:** \_\_\_\_\_

**Current Occupation:**

NRF Intern	Student	Both
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**Contact Details:**

**Cell Phone Number:** \_\_\_\_\_

**Work Telephone Number:** \_\_\_\_\_

**Email Address:** \_\_\_\_\_

**The research study forms part of a mini dissertation in order to meet the requirements to complete a Master's degree in Industrial Psychology at North-West University.**

**Title of research study:**

The evaluation of an interpersonal development programme for interns at a tertiary education institution

**Ethics number:** NWU-00084-10-S4

**Researcher:** Miss Simoné den Ouden

**Address:** North-West University  
Faculty of Economic and Management Sciences  
Private bag X6001  
Potchefstroom  
2522

**Invitation:**

You are hereby invited to participate in this research study. Please take time and read through all the information presented in this document. Details regarding the research study is included, it's very imperative to ensure that you understand what the research entails and how you could contribute.

**Purpose of the Study:**

The general purpose of this research study is to evaluate an interpersonal development programme for science, engineering and technology NRF interns at a tertiary education institution.

**What the research study is all about:**

The specific objectives of this research are:

- To investigate what the content and methodology of an interpersonal development programme for interns at a tertiary institution is.

- To determine what the experience of the participants after the interpersonal development programme was.
- To determine what recommendations can be made for future research.

**Why you are invited to participate:**

You are invited to participate in this research study because you are currently a NRF intern at the North-West University and your participation would significantly contribute to the successful completion of the mentioned study.

You also comply with the following inclusion criteria:

- specialise in the field of Science, Engineering and Technology;
- completing internship at North-West University, Potchefstroom campus;
- willing to have the focus group discussion voice recorded; and
- participating voluntary in the research study

**Procedure:**

The data for this research study will be collected by means of focus group discussions. A focus group discussion will be held at the beginning of the personal development programme and at the end of the personal development programme. After the first focus group discussion the personal development programme will be designed according to participants needs and will take place from Mei 2017 until September 2017. During the last session in September 2017 the effectiveness of this programme will be evaluated. You will be provided with the necessities needed in order to participate in the data collection process. Snacks and refreshments will also be provided at all of the above mentioned sessions.

**Participant Role:**

Throughout the data collection process participants will be required to participate in two focus group discussions and also the personal development programme. During the first focus group four questions will be verbally discussed and during the last focus group nine questions will be discussed. The monthly sessions will cover a variety of topics and participants are expected to fully commit to these sessions and actively participate during discussions.

The first focus group questions will relate to perspectives regarding personal development and the last focus group discussion will entail how perspectives shifted as well as the critical evaluation of the programme.

**Costs/Risks:**

The researcher will take all possible measures in order to ensure the emotional and physical safety of participants during the data collection process. There are also no costs related to participating in this research study.

**Benefits:**

During the NRF internship a lot of focus is placed on the technical skills and experience gained during the year of employment, but regardless of this experience interns still struggle to get a job after the internship. Research has shown that employees regard interpersonal skills and personal development as the number one differentiator during the recruitment process. By participating in this research study you would not only have developed professional and technical skills, but also personally providing you with a competitive advantage when entering the world of work. Gaining insight regarding who you are, what your strengths and weaknesses are, as well as self-awareness will help you grow as individual.

**Payment:**

You will receive no reward or payment for your participation in this research study.

**Questions:**

You are free to ask questions prior to giving consent as well as thereafter. The researcher will attempt to answer all questions as thorough as possible regarding the research study.

**Nature of Participation:**

Please note that participation in this research study is completely voluntary and that you may withdraw your participation at any given moment. Should you decide to not participate you will not be penalised in any way whatsoever.

**Who will have access to the data:**

The researcher, supervisor as well as co-supervisor will have access to all data captured. The above mentioned data will be kept in a password protected storage unit at the tertiary education institute. Finally, after the data was utilised for the intended purpose, all gathered data including the voice recordings will be destroyed.

**Confidentiality:**

Due to the nature of the focus group only partial confidentiality can be ensured as the researcher cannot promise confidentiality on behalf of other participants. All information that will be gathered will remain anonymous and will only be used for research purposes.

**Enquiries:**

If you have any additional enquiries, please feel free to contact the involved parties for further information.

**Researcher:** Miss Simoné den Ouden

**Email:** [simone.denouden@nwu.ac.za](mailto:simone.denouden@nwu.ac.za)

**Supervisor:** Prof Lené Jorgensen

**Email:** [lene.jorgensen@nwu.ac.za](mailto:lene.jorgensen@nwu.ac.za)

**Co-Supervisor:** Prof Johann Jerling

**Email:** [johann.jerling@nwu.ac.za](mailto:johann.jerling@nwu.ac.za)

Any comments, issues or concerns that you would like to bring under the researcher’s attention:

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**Acknowledgement and Informed Consent:**

I, hereby acknowledge that I have had the opportunity to carefully read this document to ask, and have answered, any questions or concerns I have about it or arising from it. I further acknowledge

that I have read and understood the information contained in this document. I consent voluntarily to participate as a participant in this research

**Full Name of Participant:** \_\_\_\_\_

\_\_\_\_\_  
**Participant's Signature**

\_\_\_\_\_  
**Date**

**Declaration by Researcher:**

- I explained the information in this document to .....
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above

**Full Name of Researcher:** \_\_\_\_\_

\_\_\_\_\_  
**Researcher's Signature**

\_\_\_\_\_  
**Date**