Perceptions of the CP experience in the Bachelor of Emergency Medical Care at a South African University of Technology

SURNAME: Mabuza
FIRST NAME: Mashadi Maureen
STUDENT NUMBER: 211160350
DEPARTMENT: Emergency Medical Sciences
FACULTY: Health and Wellness Sciences
COURSE: Master of Emergency Medical Care
DATE OF SUBMISSION: January 2020
SUPERVISORS: Dr B. T. Millar (PhD)
Dr N. Naidoo (PhD)

ACADEMIC DECLARATION

I, Mashadi Maureen Mabuza; student number 211160350, understand that plagiarism is wrong because it is pretending someone else's work is my own. I declare that this research study (Perceptions of the CP experience in the Bachelor of Emergency Medical Care at a South African University of Technology) is my own work.

Where I have used the thoughts, ideas, words and intellectual property of others, I have acknowledged them by citing and referencing them.

Signed: **Date:** 30 December 2019

Acknowledgements

1. I would like to thank my supervisors Dr B.T Millar, Dr N. Naidoo as well as Mr. S. Harrison for their expertise and ongoing support throughout my journey. Their support, counselling and patience got me through the most academically challenging days.
2. I would like to thank my family for always making it easier for me when I was required for me to be able to have the time to work on my thesis.
3. Thank you to God that I did finally finish the thesis. It did take longer than I anticipated but it is finally done.

Abstract

Work integrated learning (WIL) forms an integral part of emergency medical training in South Africa. Clinical practice is a subject in the curriculum of emergency medical care training in the Bachelor of Emergency Medical Care programme where students are required to participate in work integrated learning in the form of supervised clinical practice. Successful completion of a Bachelor in Emergency Medical Care requires students to participate and adhere to the requirements of the clinical practice subject.

The research project intended to identify perceptions of lecturers and students on the strengths and weaknesses of the clinical practice subject, with a view to informing recommendations to improve learning.

Data was collected through semi-structured, face to face interviews with lecturers involved with the subject and senior undergraduate students. Interview prompts were used to guide the interviews. Data was analysed by the researcher manually and in conjunction with the qualitative data analysing software, NVivo.

The work integrated learning taking place in clinical practice is perceived as beneficial to both students and lecturers who believe it forms an important part of emergency medical care training. The strength of work integrated learning was the ability to learn from the experience of assessing and treating real-life patients. The clinical and teaching expertise and positive attitudes of the clinical mentors towards students also contributed toward learning. The perceived weakness of work integrated learning was shortage of infrastructure, both in the form of human resources and physical clinical learning areas like hospitals and clinics. There is a communication deficiency between the Universities and the personnel in the clinical learning areas, which is observed directly and through the mismatching of mentors to students in the different year levels. Any negative attitude of clinical mentors towards teaching and students also negatively affects

the process of learning. Reciprocally, the attitudes of some students towards practitioners may contribute to the negative attitudes of the clinical mentors.

The findings inform recommendations to ensure that clinical practice subject offerings at affected Universities provide optimal learning opportunities for emergency care students.

Table of Contents

List of Tables X

Figure 1: Diagram of the BEMC Emergency Medical Care subject………….31 XII

List of Appendices XIII

CLARIFICATION OF BASIC TERMS XIV

CHAPTER 1 1

ORIENTATION OF THE STUDY 1

1.1 Introduction 1

1.2 Background to the Research Problem 1

1.3 Statement of the Research Problem 3

1.4.1. Research Sub-questions 4

1.5. Aims of the Research 4

1.6. Significance of the Research 5

1.7. Research Design and Methods 5

1.7.1. Study Design 5

1.7.2. Methods 5

1.8. Implementation of Findings 6

1.9. Positionality of the Researcher 7

1.10. Declaration of Bias 8

1.11. Arrangement of the Thesis 8

1.12. Summary 9

CHAPTER 2 10

REVIEW OF RELEVANT LITERATURE 10

2.1. Theoretical Framework 10

2.2. Stance of the Insider 11

2.3. Work-Integrated Learning Overview 13

2.3.1. WIL versus Mentorship 19

2.4. WIL in South African Higher Education 20

2.5. Work Integrated Learning (WIL) in the Health Sciences 23

2.6. Work Integrated Learning in the BEMC 26

2.7. Emergency Medical Care in South Africa 27

2.8. Clinical Practice: A Subject in the BEMC Curriculum that Gives Expression to WIL 31

2.9. Summary 33
CHAPTER 3 34
RESEARCH METHODS AND DESIGN 34
3.1 Research Design 34
3.2 Research Method 35
3.3 Participant Selection 35
3.4. Data Collection 37
3.5. Data Analysis 39
3.6. Trustworthiness and Reliability of the Study 41
3.7. Ethical Considerations 44
CHAPTER 4 46
DATA ANALYSIS 46
4.1 Analysis of Data 46
Table 4. 1: Interview Guide 47
4.2. Emerging Themes from Student Participants' Data 47
4.2.1. How Teaching and Learning Occurs in CP 49
4.2.1.1. Conduct of the Clinical Mentors Towards Students in Clinical Practice 52
4.2.1.2. Availability of Resources 61
4.2.2. Planning, Monitoring and the Cost Of Participating in CP 72
4.2.2.1. The Structure and scheduling of CP 75
4.2.2.2. Cost of Participating in Clinical Practice 76
4.2.3. The Knowledge of Clinical Mentors on the BEMC Course 81
4.2.4. Students' Perceptions on Available Support Structures Within the University 84
4.2.5. Students perception of discrimination in CP 86
4.3. Data Analysis: Lecturer Participants 88
4.3.1. Theme L1: How Teaching and Learning Occurs in CP 89
4.3.2. Theme L2: The Relationship Between the University and the Clinical Learning Areas 94
4.3.3. Theme L3: Lecturer Perception on Learner Support in CP. 96
Table 4. 29: Lecturer participant's responses about provisions made by the university to support students 96

4.4. Summary 97
CHAPTER 5 100
DISCUSSION 100
5.1. What are the BEMC Senior Students and Lecturers' Perceptions of the CP Subject? 100
5.2. What are the Perceived Weaknesses of CP? 105
5.2.1. Capabilities of CP Areas to Support the Programme 105
5.2.2. The Knowledge of Clinical mentors of CP 109
5.2.3. Cost-implications of CP 111
5.2.4. Perceived Discrimination in CP Domains 113
5.2.5. Perceived Limitations in Learner Support by the University EMS department 115
5.3. Building Upon Perceived Strengths and Addressing the Perceived Weaknesses 117
5.4. Limitations of the Study 120
5.5. Summary 120
CHAPTER 6 122
RECOMMENDATIONS AND CONCLUSION 122
6.1. Recommendations 122
6.1.1. Recommendation 1: The Capabilities of Clinical Learning Areas To Support the Programme 122
6.1.2. Recommendation 2: Cost-intensity of Participating in CP in the BEMC 124
6.1.3. Recommendation 3: The knowledge of Clinical Mentors of CP 125
6.1.4. Recommendation 4: Perceived Discrimination in CP 126
6.1.5. Recommendation 5: Perceived Limited Support by the University EMS Department 127
REFERENCES 130
APPENDIX A 143
PARTICIPANT INFORMATION AND CONSENT FORM 143
APPENDIX B 146
SEMI-STRUCTURED INTERVIEW GUIDE FOR SENIOR STUDENT PARTICIPANTS 146
APPENDIX C 147

SEMI-STRUCTURED INTERVIEW GUIDE FOR LECTURER PARTICIPANTS 147
APPENDIX E- 148
ETHICS APPROVAL 148
APPENDIX F...149
INIVITATION TO PARTICIPATE IN RESEARCH 149

List of Tables

Table 2. 1: Types of WIL (Adapted from Sterling et al., 2015; Kramer and Usher, 2011)...........16
Table 2. 2: Types of WIL (Adapted from: SABPP, 2014b)...17

Table 4. 1: Interview Guide..47
Table 4. 2: Themes and sub-themes 48
Table 4. 3: Student participants' responses about the positive impact of CP 50
Table 4. 10: Student participants' responses about the students' perceived negative encounters with clinical mentors...53
Table 4. 4: Student participants' responses about the attitudes of clinical mentors towards teaching...55
Table 4. 12: Student participants' responses about clinical mentors' willingness to teach.......56
Table 4. 11: Response on how perceived negative encounters may affect the students' CP 56
Table 4. 5: Student participants' responses about their perceived negative attitude of clinical mentors 58
Table 4. 6: Responses about the amount of CP exposure 60
Table 4. 7: Responses about how students use CP attachments to their benefit.....................60
Table 4. 8: Student participants' responses about clinical rotations in CP 64
Table 4. 9: Responses on how clinical rotations impact learning in CP 66
Table 4. 13: Student participants' responses about shortage of infrastructure in CP 67
Table 4. 14: Student participants' response about strategies that may improve CP 69
Table 4. 15: student participants' responses about planning, monitoring and the cost of participating in CP 73
Table 4. 16: Student participants' responses about the expenses that accompany participation in CP 76
Table 4. 17: Student participant response on how lack of sleep affects students....................78
Table 4. 18: Student participants' responses on how CP is monitored 78
Table 4. 19: Student participants' responses about how the students have to brief the clinical mentors on their scope of practice 81
Table 4. 20: Student participants' responses about possible strategies for improving the interaction between students and lecturers..83
Table 4. 22: Student participants' responses about the perceived emotional support required by students from the EMS department and the University 85
Table 4. 23: Response about the perceived academic support required by students from the EMS department and the University 86
Table 4. 21: Student participants' possible strategies for improving the interaction between students and lecturers...87
Table 4. 24: Themes emerging from lecturer interviews...88

Table 4. 25: Lecturer participant's response about how perceived insufficiencies in CP may affect future practices 90
Table 4. 26: Lecturer participants' responses about perceived CP objectives 90
Table 4. 27: Lecturer participants' responses about how perceived shortages in infrastructure affect CP 92
Table 4. 28: Lecturer participants' responses about the perceived challenges that accompany running CP 94
Table 4. 29: Lecturer participant's responses about provisions made by the university to support students 96

List of figures

Figure 1: Diagram of the BEMC Emergency Medical Care subject…………31
Figure 2: Summary of themes and subthemes 49
Figure 3: Example fourth year BEMC student's rotation CP (as deducted from student interviews and a sample clinical roster)...................................63
Figure 4: Example of an ideal model of BEMC student's rotation CP (student perceptions) 65

List of Appendices

APPENDIX A **143**
APPENDIX B **146**
APPENDIX C **147**
APPENDIX D…………………………………………………………… **142**
APPENDIX E…………………………………………………………… **143**

CLARIFICATION OF BASIC TERMS

In this research various acronyms and profession-specific terms are utilised, such as:

AEA: Ambulance Emergency Assistant
B Tech EMC: Bachelor of Technology: Emergency Medical care
BAA: Basic Ambulance Assistant
BEMC: Bachelor of Emergency Medical Care
CCA: Critical Care Assistant
CP: Clinical Practice
EMC: Emergency Medical Care
EMS: Emergency Medical Service
HPCSA: Health Professions Council of South Africa
MVA: Motor vehicle accident
NDEMC: National Diploma: Emergency Medical Care
PBEC: Professional Board for Emergency Care
WIL: work integrated learning
UoT: University of Technology

CHAPTER 1
ORIENTATION OF THE STUDY

1.1 Introduction

The Bachelor of Emergency Medical Care (BEMC) is the qualification with the highest scope of practice in the South African pre-hospital Emergency Care (EC) milieu. Clinical Practice (CP) is a subject in the BEMC degree curriculum at four universities in South Africa[1] (two of them being Universities of Technology and the other two, comprehensive universities) (Cloete and Cloete, 2010). This subject prepares students for the field of pre-hospital Emergency Care in that it provides students with Work Integrated Learning (WIL) opportunities. During WIL students are placed in CP sites (such as ambulance services and hospital emergency departments among others), in order to learn the professional and clinical skills employed during treatment of real patients. This research studied the way the CP subject achieves its set objectives and how the senior students and staff involved in CP perceive and experience this subject. The focus of the research was on third- and fourth-year students as well as CP instructors involved in the facilitation of CP. Due to scope and logistical limitation, only one university is the site of the data collection for the research.

1.2 Background to the Research Problem

The above-mentioned Bachelor of Emergency Medical Care (BEMC) is a qualification presented at four South African universities (South African Qualifications Authority (SAQA): Online). The qualification differs in name depending on the University presenting the programme. At some institutions it is called a Bachelor of Health Science in Emergency Medical Care (SAQA, Online). For the purpose of this thesis the term that will be utilised is BEMC because it is the term used at three

1. [1] The landscape of South African Higher Education changed with democracy. Universities of Technology (UoT) were created by merging former Technikons (B. Cloete; N. Cloete. 2010. Institutional Types in HE in SA); these institutions offer vocationally-oriented diplomas and degrees. Comprehensive universities came about through a merger of a traditional university with a Technikon.

Universities offering the qualification. The qualification was designed following a needs analysis by the Health Professions Council of South Africa and the National Department of Health (National Emergency Care Education and Training Policy (NECET Policy), 2015). The development of the qualification was aimed at addressing the needs of the South African healthcare system, the emergency care burden and in particular the long-distance transfer of critically ill or injured patients (Department of Health: South Africa; 2017). In addition, it sought to ensure an improved prognosis of patients in the pre-hospital field and in critical condition. A need for a highly-skilled emergency medical professional was identified. The training required must be enough not only to enable students to graduate but also to minimise the risk of further harm to patients being treated by practitioners (Department of Health: South Africa; 2017; Kurbiske, 2014). The BEMC development was directly related to the alignment of EC qualifications to the then new higher education qualification framework (Kurbiske, 2014).

In Emergency Medical Care education, there is a focus on classroom-based education, and workplace-based learning in the form of WIL. The WIL forms part of a subject called CP. CP as part of the BEMC degree curriculum requires students to participate in simulated skills training, simulated laboratory participation, clinical ambulance shifts, and hospital shifts in order to obtain the clinical skills and practice required to qualify as Emergency Medical Care Practitioners. The WIL component of EMC training is crucial to patient safety and practitioner readiness because upon completion of their studies graduates in the BEMC are not afforded an internship year where they would be clinically mentored in the field of Emergency Medical Care (EMC). Interestingly, they qualify to be registered as independent practitioners immediately upon graduation.

An internship year (currently two years in medicine in South Africa) is a period where professionals practice in the field which they studied, under the supervision of a qualified and experienced professional (Erasmus, 2012). This improves the confidence of the intern in their field and equips them with the ability to operate in the world of work independently (Nkabinde, Ross, Reid and Nkwanyana, 2013). In the BEMC, students must be deemed competent to be able to function as independent practitioners through a process of work integrated learning. This research intended

to document how this model of WIL in the CP subject is perceived by the lecturers and senior students to provide optimal opportunities for learning during WIL.

1.3 Statement of the Research Problem

As part of the BEMC curriculum, students are required to participate in WIL, a component of the CP subject. During WIL students are scheduled to work under the supervision of medical practitioners like nurses, doctors or paramedics (Abery, Drummond & Bevan, 2015). In nursing, WIL experiences have been significantly researched by several authors (Mochaki 2001; Cassimjee, Cur & Bhengu 2006; Sharif & Masoumi, 2005). Mochaki, (2001) intended to describe the challenges in WIL in nursing as well as how registered nurses utilised teachable moments to enhance learning in clinical practice. The challenges were that there were increases in workload for the registered nurses, shortages in personnel with clinical expertise to teach in clinical accompaniments as well as lack of knowledge of learning objectives.

Cassimjee *et al*., (2006) and Sharif and Bhengu (2005) studied student nurses' perceptions of clinical learning in different contexts. The findings revealed that the students perceived the time spent with clinical instructors as important however they were not satisfied with the clinical component of their studies (Sharif and Bhengu 2005) and only 59% of students had been seen by the clinical instructor over a period of three months (Cassimjee *et al*.,2006).Other studies of WIL in nursing found the benefits of WIL to be academic, personal and career development and improved competence in the field of nursing (Lekhuleni, van der Wal & Ehlers, 2004). The challenges identified range from anxiety of students, lack of support during clinical placements and inadequate opportunities to learn (Lekhuleni *et al.,* 2004). In EMC training there are no participant records on the challenges and the benefits of WIL, which may help determine the experiential status of WIL in EMC training and also provide data for WIL stakeholders to see if their infrastructure needs improvement or not.

Although WIL in EMC training has been practiced for a long time, it is important to identify perceived weaknesses and perceived strengths of the programme because the findings of this research may determine how these perceived weaknesses can be addressed and also how the perceived strengths may be built upon to enhance the BEMC CP subject and its WIL experience. WIL is also a prerequisite for professional registration. This impacts the need to enhance the WIL experiences in the learners' favour.

1.4. Research Question

What do BEMC lecturers and senior students perceive as the strengths and weaknesses of the CP subject?

1.4.1. Research Sub-questions

(a) What are the BEMC lecturers' perceptions of the CP subject?
(b) What are the BEMC senior students' perceptions of the CP subject?
(c) In what way can the perceived CP subject strengths be built upon and the perceived weaknesses be addressed?

1.5. Aims of the Research

The aims of this research were to identify the perceived strengths and weaknesses of the CP subject and, consequently, to inform recommendations to enable the CP subject offerings in the four-year BEMC degree at a South African University of Technology. This knowledge is likely to help provide optimal WIL opportunities for students. The findings of this research may not be generalised to other institutions offering the BEMC because although the WIL model may be implemented to the satisfaction of the HPCSA, institution-specific weaknesses and strengths may differ. Some elements may be transferable.

1.6. Significance of the Research

The research documents and explains how BEMC students and lecturers perceive WIL in CP so that the findings of the study may inform recommendations to ensure that CP subject offerings at affected universities might improve to provide optimal learning opportunities for students. WIL is a system of pedagogic and assessment practices across a range of academic disciplines that integrate formal learning and workplace concerns (CHE Monitor, 2011: 3). The successful completion of a qualification in EMC is heavily reliant on participation in WIL and fulfilment of the HPCSA prescripts. This WIL practice in EMC has not been adequately researched.

1.7. Research Design and Methods

1.7.1. Study Design

The research design for this study was qualitative description and the results and findings were based on data analysis of participants' responses in face-to-face interviews where participants provided their verbal description of WIL.

1.7.2. Methods

The information obtained through the literature review provided the background necessary to guide the development of the interview guide used to gather data for the study. The literature review was based on previous research in other fields, the BEMC and policy documents. This literature helped provide bases for subject of enquiry, there were many areas of WIL that were documented which if studied in this research would potentially generate repetition. This narrowed the focus of the study and the interview guide needed to reflect the scope which this study intended to explore. I also saw a number of theses from which gave examples of interview guides.

For the purpose of the study, a specific South African University offering the BEMC was chosen. The site was chosen because it had the highest of registered third and fourth year BEMC students as well as lecturers at the time which afforded the

researcher opportunities for a bigger sample and gather data to satisfy the enquiry. All participants of were involved in clinical practice somehow, the student as beneficiaries and lecturers as organisers. The bigger sample size increased the chance to verify findings and not just report what is said by a handful of participants. It also came with a possibility that there were students and lecturers with different backgrounds, ideas as well as socio economic statuses. Secondly it was convenient and cost effective. At the time of data collection the University had been offering the qualification for about five years.

To identify the perceptions on the current practice of WIL in BEMC training, structured one-on-one interviews were considered an appropriate method of inquiry for this research. An interview guide was also developed by the researcher. The interview guide is a list of questions the researcher wanted answered by the end of each interview. The guide helped drive the conversation between the researcher and the participants to minimise the risk of discussing topics outside of the scope of the research. The researcher asked the participants the same open-ended questions and the interview guides were utilised to avoid having broad non-specific answers and guide the flow of the interviews.

Face-to-face interviews with 20 third- and fourth-year Bachelor of Emergency Medical Care students studying at a South African University of Technology as well as the four lecturers involved in the programme were conducted. The target population for the interviews was made up of lecturers (namely, the coordinators of WIL in the BEMC) as well as third- and fourth-year students registered in the programme at the same university. More details on the research methods, population, sampling methods, data collection, data analysis, reporting and ethical considerations are discussed in Chapter Three.

1.8. Implementation of Findings

Upon completion of the study, it is intended that findings of the research will be made available to the Professional Board of Emergency Medical Care at the HPCSA, as well as institutions of higher learning involved in the education and training of Emergency Medical Care.

1.9. Positionality of the Researcher

I am a qualified Emergency Care Practitioner who obtained a National Diploma in Emergency Medical Care (ND: EMC) in 2012 and in 2014 obtained a Bachelor of Technology in Emergency Medical Care (B Tech EMC). As a student in both qualifications, I participated in WIL as prescribed by the policies of the health professions council of South (HPCSA) and the higher education institution (HEI). I am an employee of the South African National Defence Force (SANDF) and studied both programmes through a bursary offered by the SANDF. I was recruited to study in order to capacitate the SANDF Emergency Training Academy. Now registered with the HPCSA as an Emergency Care Practitioner and appointed as a coordinator of the Diploma in Emergency Medical Care programme, where necessary, I am called up to participate in deployment missions as well as other military operations.

The SANDF also has an operational ambulance department where emergency medical practitioners are scheduled to work in the ambulance department to keep current within the field of EMC. Furthermore, EMC practitioners participate in Continuous Professional Development (CPD) activities in order to keep up with current practices with regards to patient management. CPD activities may also serve as refresher courses where practitioners refresh their knowledge on content covered during their period of study.

During my studies I participated in WIL, and therefore enjoy an insider status. Here I experienced differences in the way in which students were being received at the clinical placement areas as well as the way the WIL was conducted. During my experience in clinical practice, my goal was to satisfy the requirements of the subjects, obtain skills and have my evaluation forms filled out by the clinical mentors. Some services and clinical mentor made a positive contribution towards achieving the requirements and obtain the skills I needed to graduate. Other departments I perceived to be indifferent, the clinical mentors did not have the capability to teach procedures in my scope especially in second and third, while some services had qualified practitioners but not equipment required to perform such skills. This led to me attending more clinical practice shifts in hope of acquiring the skills and fulfilling the course requirements.

My experience drove my curiosity and I wanted to know if my experiences were unique to me or not and seek to document the experience in the hope of changing something. This research was derived from my interest in exploring the perceptions of BEMC students regarding WIL. I believe, as a pedagogic stance, that WIL is a crucial component of EMC training and that it can add significant value to paramedics gaining independence of practice. However, in this research I wish to document how the BEMC lecturers and senior students perceive WIL in CP in order to determine the CP value proposition or its inherent risk.

1.10. Declaration of Bias

By definition, an insider researcher is said to be "a researcher who undertakes a study within a community or organisation that she/he comes from" (Troller, 2011). Participants are considered co-researchers as they may be colleagues and the nature of the data collected is seen to be personal. In addition, as Floyd and Arthur (2012) states, through undertaking research as an insider, a researcher is enabled and gains more insight into the participants, but the study itself it is not without challenges. The fact that I am undertaking a study about a phenomenon I encountered as a student made me an interpretive insider-researcher. This may be construed as bias; however, as a researcher I have declared this bias and am aware that I need to approach the research project with care and meta-cognitive reflection (Floyd and Arthur, 2012). The key features of insider research, advantages and disadvantages will be discussed later in Chapter Two.

1.11. Arrangement of the Thesis

This section provides a brief outline of the study and the layout of the report.

Chapter One is entitled ***Orientation of the study***. In this section, the background and the context of the study are provided. The problem statement, the aim and the research design was provided.

Chapter Two is entitled ***Review of Literature***. This section deals with the review of local and international literature on WIL in the context of CP as well as the theoretical framework of Phenomenology. In order to provide context for this research, a brief history of Emergency Medical Care in South Africa will be provided.

Chapter Three is entitled ***Research Design and Methodology***. The research design and methods for this study are elaborated upon. The research tool, ethical considerations, and reliability applicable to this study will be described.

Chapter Four is entitled ***Data Analysis*** where the results/findings of the research are discussed.

Chapter Five is entitled ***Interpretation and Discussion,*** where a data collected will be interpreted and discussed in detail. Limitations of that research will also be discussed.

Chapter Six is entitled ***Conclusions, Recommendations.*** The conclusion on the study will be made and the recommendations are presented.

1.12. Summary

The first chapter has provided an overall orientation to the study as well as the background to the study with the positionality of the researcher. The problem statement, aim and the research question were discussed. A brief introduction to the research methodology and design was also discussed. Lastly, an outline of the report and a brief summary of the chapters to follow was formed. In the next chapter the review of literature will be discussed. The personal pronoun: ‘I’ will be used when comfortable to do so. More consistently, ‘the researcher’ will be referred to as a matter of personal preference and is not to be misconstrued as epistemic incoherence.

CHAPTER 2
REVIEW OF RELEVANT LITERATURE

This section reviews the relevant literature and the theoretical framework is discussed. WIL, in the South African Higher Education system is defined and the types are discussed. The history of Emergency Medical Care is discussed. The section presents what is well known about the topic, what gaps exist in the knowledge and suggests what contribution may be made by this study.

2.1. Theoretical Framework

The conceptual framework that provided a lens for this qualitative research is that of phenomenology. According to McMillan and Schumacher (2010), a phenomenological study is utilised if the intention of the study is to make meaning of everyday lived experiences. Cresswell (2007) further states that this research approach is suitable in the case where the research intends to determine what several participants who have a similar experience have in common. This means that the participants share how they perceive a phenomenon. In phenomenological studies the aim is to describe the phenomenon as accurately as possible refraining from pre-given frameworks, but remaining true to the facts (Groenewald, 2004).

According to Cilesiz (2010), there are three philosophies that exist in phenomenology (Yuksel and Yildirim, 2015). The theories are transcendental, hermeneutic and existential (Cilesiz, 2010; Yuksel and Yildirim, 2015). The transcendental philosophy is concerned with being outside of the experience, like having a view from above (Yuksel and Yildirim, 2015). Hermeneutic phenomenology is concerned with interpretation of the lived experiences as opposed to just describing the lived experiences (i.e. the existential) (Yuksel and Yildirim, 2015). Therefore, this research adopted a hermeneutic phenomenological framework. Phenomenological researchers believe that the researcher cannot be separated from their presuppositions and that the researchers must not pretend otherwise (Groenewald, 2004). It is also difficult to identify or prevent researcher induced bias (McMillan and Schumacher, 2010). When a researcher chooses to utilise this study

design, bracketing should be done. Bracketing sometimes called Epoche[2] is when the researcher declares his/her bias with regards to the study (McMillan and Schumacher, 2010; Padilla-Diaz, 2015). If bracketing is not done properly it can lead to interference in the interpretation of the data (McMillan and Schumacher, 2010; Padilla-Diaz, 2015).

Chan, Fung and Chein (2013) explain the strategies that can be utilised to ensure adequate and sufficient bracketing. The strategies must be practiced before the researcher starts with the research project; they must carry on during literature review as well as during data collection and data analysis (Chan *et al*., 2015).

2.2. Stance of the Insider

As indicated in Chapter One, according to Floyd and Arthur (2012), an insider researcher is embedded in the research in terms of being a member of the institution researched. Thus, I am aware of my stance as an insider researcher and the bias that this may entail, I have undertaken research and gathered data at the same university where I am currently registered and where I was an undergraduate student and first encountered the phenomenon I have researched, namely the student experience in the subject: CP.

Challenges and benefits of insider research are related to the relationship the researcher has with the participants and the institution studied. Gaining access to the participants and the institutions being studied was fairly easy and the possibilities of the rejection of the study were minimal. Being an insider also enabled the researcher to have immediate access to the participants (Floyd and Arthur, 2012; Trowler, 2011). According to Trowler (2011), as in insider researcher it is easier for the researcher to probe the participants and control the flow of the conversation during data collection. Furthermore, some of the participants felt free to talk about the subject of investigation and even volunteer information pertinent to the study without

---

[2] Epoche- a greek word meaning suspension of judgement, the methodological attitude of phenomenology in which one refrains from judging whether anything exists or can exist as the first step in the phenomenological recognition, comprehension, and description of sense appearances: transcendental reduction (Merriam-Webster: Online; available on www.merriam-webster.com/dictionary/Epoche)

further probing. In cases where there was clarity needed on responses given it would have been easier to follow up on the participants as it was easier to access them. The aspects above helped to make conducting the research and the process of data collection logistically easier.

Familiarity has its benefits, but also had its drawbacks (Floyd and Arthur, 2012). It has the potential to impose restrictions in data collection. It may cause participants to censor themselves and not tell the whole truth. The participants may feel that they need to lie or give short answers if they fear being exposed. There may be issues as far as maintenance of anonymity is concerned. Difficulties arise when participants share identifiable information, for example if the participant talks about a particular event related to him/her, it might reveal his/her identity. Therefore, such information needs to be suitably "disguised" to maintain anonymity. When undertaking insider research, relevant ethical guidelines relating to undue inducement and coercion, need to be adhered to.

In other instances, the researcher may be aware of information pertaining to the study at the same time the participant lies about the same information (Floyd and Arthur, 2012). Furthermore, the researcher will have a challenge going forward in terms of the maintaining confidentiality because maintaining confidentiality is an on-going process. One cannot forget information gathered through data collection. Even if one cannot reveal that information, it could affect both the researcher and the participants professionally and personally even after the study has been completed.

Personally, as an insider researcher, I have preconceptions and beliefs relating to the phenomenon being studied. I believe WIL is an important part of the BEMC programme and that its implementation is crucial; however, from experience I believe that there are areas of improvement. The beliefs may form part of my bias and require me to be aware and to resist imposing my beliefs on the study.

As an insider researcher, I am aware of the challenges as well as the positive attributes and potential drawbacks. I adhered to all the prescripts related to ethical guidelines as described in Chapter Three. I am not personally nor professionally involved with the student participants, but I am professionally familiar with the

lecturer participants in that most of them are my previous lecturers and colleagues as we do have relationships in other forums of Emergency Medical Care. With that stated, I tried to avoid bringing any assumptions relating to my previous beliefs and experiences to either group of participants. I committed to reporting the findings as I found them, regardless of my prior knowledge of the phenomenon or the participants involved. I was aware that I might come to new and perhaps even surprising findings during the review of literature or when gathering data.

2.3. Work-Integrated Learning Overview

WIL refers to educational programmes that incorporate workplace-based component but are also connected to classroom learning or an individual's programme of study (Kramer and Usher, 2011). Patrick *et al*. 2008 also define WIL as an umbrella term used for a range of approaches and strategies that integrate theory with the practice of work within a purposefully designed curriculum. This concurs with the WIL definition according to the South African Council of Higher Education (CHE) (2015) which states that WIL "is an umbrella term that describes approaches to career-focused education that involves classroom learning and workplace learning that is appropriate for the qualification". Following the definitions above, WIL has to do with putting into practice outside of the classroom what is learnt in the classroom setting. WIL programmes are qualification aligned in that they involve curriculum, educational and assessments practices and processes across academic disciplines with integrated formal learning and workplace concerns (Kramer and Usher, 2011). O'Shea (2014) utilises the term "placement" and defines it as the umbrella term describing all structured work experiences obtained during a period of study. This is an example of how the terminology may differ while the emphasis is the same. In South Africa the term utilised is WIL and as such, the term utilised in this text is WIL.

WIL attempts to improve employability[3] as well as civic responsibility[4] (Oliver, 2015). WIL may be comparable with academic service learning which is defined as:

> "…*a course-based, credit-bearing educational experience in which students participate in an organised service activity that meets identified community needs and reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility*." (Bringle & Hatcher, 1995: 112)

They are both classroom and experiential site-based education where students are required to participate in a community-centred program. The difference between the two is that WIL is intended to benefit the students and facilitate learning whereas academic service learning that intends to benefit the both the public and address the content of the course to the benefit of the students equally (Bringle & Hatcher, 1995). For WIL programmes to be successful it is important to align the academic and workplace practices for the mutual benefit of both students and workplaces (CHE, 2011a; Kramer and Usher, 2011; Abery, Drummond and Bevan, 2015). WIL means that whatever is taught in class needs to be implementable and relevant to workplace practices. WIL programmes intend to encourage students to reflect on the experience and develop and refine their own conceptual understanding. The students will, therefore, make their own meaning of what they have learnt and from their experiences may be afforded opportunities to improve their workplace practice and learn through their experiences (CHE, 2011a; Kramer and Usher, 2011).

WIL, as a modality, has complimentary references. It is advantageous because it has academic benefits; it improves academic performance and increased motivation to learn as it presents students with opportunities to reflect on their practice and thus encouraging them to want to perfect their practice (CHE, 2011a; Martin and Hughes, 2009). It improves student confidence, enhances communication skills, encourage team work and leadership cooperation (CHE, 2011a; Flinders University: Online). Career development is enhanced with regards to professional identity and

[3] Employability - students and graduates can discern, acquire, adapt and continually enhance the skills, understandings and personal attributes that make them more likely to find and create meaningful paid and unpaid work that benefits themselves, the workforce, the community and the economy.

[4] Civic responsibility - responsibility of a citizen (attitudes and actions associated democratic governance and social participation) (leaning to give: online)

development of positive work values and ethics (CHE, 2011a; Flinders University: Online). Finally, WIL improves skills development and competence in the field and increased technical knowledge and skills (CHE, 2011a; Flinders University: Online). Implementation of WIL is not without challenges, according to CHE (2007); there is mal-alignment of curricula and pedagogic workplace practices. Furthermore, in some institutions of higher learning the practice of WIL is fairly new and offers challenges with regard to the curricula and also in the logistical and financial aspects of the programme (Rook, 2017; Abery *et al.*, 2015). Abery *et al.*, (2015) further indicate that poor student preparation for WIL also poses a challenge in that in clinical settings poor preparation can pose risks to patients and also have a negative impact on relevant stakeholders[5].

The practice of WIL, if well developed and implemented, is seen as the best way of learning (Coll, Eames, Pak, Lay, Hodges, Bhat, Ram, Ayling, Fleming, Perkins & Wiersma, 2009). It is believed that the students learn better when they do the skills than when they are shown something (Coll *et al.,* 2009). The students who participate in WIL are able to determine the areas that need more attention (Kolb and Kolb, 2005). Furthermore, as opposed to learning by reading or being taught, the experience of learning by doing lasts longer (Kolb and Kolb, 2005).

There are different types of WIL as stipulated by CHE (2011), they are action learning, apprenticeships, cooperative education, experiential learning, inquiry learning, practicum placements, and problem-based learning projects to name a few. Stirling, Gretchen, Banwell, MacPherson and Heron, (2016) also list the different types of WIL as Internships, placement, practicum, field experience, field work, sandwich course, work study and co-op education. A description of the different types of WIL is tabulated in Table 2.1.

[5] Stakeholders- areas of clinical learning such as ambulance departments and hospital departments

Table 2. 1: Types of WIL (Adapted from Sterling *et al.*, 2015; Kramer and Usher, 2011)

Types of Work Integrated Learning	
Co-operative (Co-op) programmes	Semester-long paid work placements that are an integral part of an academic degree/ diploma programme based on alternating academic and work terms.
Internships /Placements/ Practicum	An amalgam of non-co-op work placements. They are often shorter than co-op programmes and do not always include payment
Sandwich Course	Supervised work experience in practice of the students' future profession. Occurs outside period of study.
Work study	Work experience that is not necessarily in the practice of a future profession.
Field Work	Work experience taking place through participation in work activities and site visits.
Field Experience	Work exposure that is linked to programme content and designed for the purpose of preparation for professional practice.

In addition to the typology listed above, Usher and Kramer (2011) also add service learning, clinical rotations, industry attachments, community service and professional work experience. The terminology varies from programme to programme and to some extent may be used interchangeably (Kramer and Usher, 2011). The use of different terms is somewhat confusing in that from the definitions it does not warrant the use of one term over another as they may not accommodate all the forms. The common idea is that WIL enables students to integrate knowledge obtained through the study with the practice-based knowledge obtained through being immersed in a work context (CHE, 2011; Martin and Hughes, 2009; Stirling *et al.,* 2016). The forms of WIL may differ in structure, but it is important to appreciate that they all offer students an opportunity to learn within a work setting (Stirling *et al.*, 2016).

The term 'WIL', therefore, encompasses all the forms indicated below in Table 2.2. It is not utilised exclusively for a type of practice involving integration of learning and the world of work, but WIL is an umbrella term relating to all forms tabulated. WIL is

career-focused education which includes classroom-based and workplace-based forms of learning that are appropriate for the professional qualification (CHE, 2011; Martin and Hughes, 2009; Abery *et al.*, 2015). Classroom-based forms of WIL may include simulated learning as well as laboratory work.

In WIL people learn from experience through observation, reflection and then making sense of the experience and lastly applying and testing the concepts learned on new experiences (CHE, 2011a). On the BEMC programme students learn from registered nurses, doctors and paramedics and put into practice what they have learned. According to the South African Board for People Practices (SABPP) (2014b), there are four models of WIL. They are the short work exposures, apprenticeships, learnerships and workplace-based experience (SABPP, 2014b). Short work exposures are organised by the academic institution, where groups of students are given an opportunity to observe work and have presentations from experts in the field (SABPP, 2014a). Work exposure may involve having a field expert like a paediatrician demonstrate a procedure to and EMC or nursing class such as the most appropriate method of establishing intravenous access on a new-born.

Table 2. 2: Types of WIL (Adapted from: SABPP, 2014a)

WIL according to SABPP 2014	
Workplace-based learning	Students participate in tasks that are stipulated within their curriculum while they are still registered as students studying towards a qualification. This carries on for about a day to a week, but it is possible to participate in this model for longer periods of time
Apprenticeship	WIL programme facilitated by employers for specialised trades in the National List of Artisan Trades
Learnerships	Learners are employed by organisations; their key role is centred towards ensuring that the student acquires his/her qualification. Learnerships are managed by employers in conjunction with the students and the academic institution
Short Work Exposures	Groups of students are given an opportunity to observe work and have presentations from experts in the field

Both the tables above give lists and describe the types of WIL models. Their benefits are similar to those indicated above. The significant differences that exist have to do with the context to which they are applied. Internships are mostly part of a career development programme that is generally governed by statutory bodies in health professions, accountancy and law (SABPP: 2014a). There are other such programmes that are independent of statutory bodies. Internships are paying graduate training and development programmes that are twelve to twenty-four months long. Co-operative programmes are structured educational credit bearing WIL programmes where the students' academic studies are integrated with work experience where students are given an opportunity to acquire experience skills relevant to their chosen career (Haddara and Skates: 2007). Participants are paid during their co-operative programmes' attachment (Haddara and Skanes: 2007).

Apprenticeships are popular in business studies, they are time-honoured training systems that involve a combination of the classroom and on the job training under a direct skilled employee (Lerman: 2014). Firms use this model of WIL to train students on skills and operational culture specific to the company or organisation (Lerman, 2014). Apprentices are paid during their apprenticeship programme. Apprenticeships, internships and co-operative programmes are paying WIL programmes and that can pose financial strain for companies participating in such programmes (Cullen: 2007). The financial burden that accompanies participation in these programmes may make companies become reluctant to enlisting to participate. In South Africa the funding of these programmes does not only lie with the companies themselves but the government through the tax incentive programmes, and sector education and training authorities also fund WIL programmes of this nature (SABPP: 2014a). This does help encourage the organisation to participate in the programmes.

Short work exposures on the other hand are structured workplace visits where students in school are afforded an opportunity to shadow a professional for given period of time in preparation for their career (SABPP: 2014a). These are initiatives like the "take a girl child to work day". There is no remuneration for participation in programmes like this one (SABPP: 2014a).

2.3.1. WIL versus Mentorship

WIL was discussed extensively in the previous section. This section describes how mentorship programmes differ from WIL. A mentorship is described as a programme where one person assists another person to grow and learn in a safe and sympathetic relationship (University of Leicester: Online). The aim of mentoring programmes is to support new staff members or mentees, to help with induction in to new programmes mostly during probation period or following graduation. Other aims include having someone to talk to if there are any problems at work and to provide opportunities for mentees to reflect on what they have achieved (American Psychological Association, 2006; Dennen, 2000). Mentorship programmes are said to beneficial to both the mentor and the mentee. The benefits to the mentee are that it improves their self-confidence and motivates as the programme continues, it affords them opportunities for training and career development, and they are given support where necessary (American Psychological Association, 2006; Ganesh, Bozas, Subban and Munapo, 2015). Mentors benefit from mentoring by increasing their understanding of themselves and the organisation, they develop new skills such counselling and communication and lastly it enhances their confidence and personal satisfaction (American Psychological Association, 2006;Ganesh *et al*., 2015).

The mentorship programmes seem to be beneficial to both parties involved however, the challenges of mentorship programmes remain finding the mentor with the qualities to be a mentor. In clinical mentorship programmes the role of the mentor is to teach, supervise and assess students in order to develop a workforce for industry (Cassey and Clarck, 2011). Mentors need to possess qualities such as abilities to communicate, listen, being flexible, friendly and encouraging and another quality is being patient (Grogan *et al*., 2013). Other challenges that may accompany include mismatching a mentor and a mentee where the relationship does not fit, mentor frustration is another disadvantage of mentoring in that mentors may become frustrated when the mentee is slow to reach their objectives, the mentor's frustration may be projected to the mentee. (Assignmentpoint: Online, 2016). Mentees also tend to emulate what the mentors are and do which results in the potential of them copying how the mentor operates instead of establishing their own style of operating (Assignmentpoint: Online, 2016). Looking at the benefits of mentoring, it is clear that

effectively and efficiently implemented mentoring can benefit the participants. However, its implementation needs to be sustainable. The traits needed for one to be a mentor as well as the benefits to the students show that mentorship programmes are time consuming and hard work, which may mean that one may not be able to mentor a number of mentees at any given time. When comparing mentorship programmes with work integrated programmes it is important to note that WIL programmes are simply about affording the student or protégé opportunities to learn towards their career, train towards their chosen fields while mentorships are aimed at personal development of the mentees where the mentor is available not just to teach but to counsel, be a good listener, advise and be available to the mentee for support on any matter arising (Philips-Jones, 2003). Mentorships are hands-on one-on-one long term relationships with the protégé (Wong and Premakumar, 2007; Philips-Jones, 2003).

2.4. WIL in South African Higher Education

The higher education system of South Africa is made up of traditional Universities, Universities of Technology and Comprehensive Universities. The three types of Universities differ according to their qualification offerings and the context in which the qualifications are designed (Luescher-Mamashela, 2013). Traditional Universities offer theoretically oriented degrees like the Bachelor of Arts and Bachelor of Science and post-graduate qualifications. Universities of Technology (UoT) are former Tecknikons that have merged; these institutions offer the vocational oriented diplomas and degrees like the Bachelor of Technologiae, Master’s and Doctoral degrees (Luescher-Mamashela, 2013). Lastly, comprehensive universities offer both types of qualifications offered at UoTs and those of traditional universities (Luescher-Mamashela, 2013).

The different institutions offer different qualifications at different levels of Higher Education Qualification Framework (CHE, 2011b). The Universities deemed it necessary for students to engage in qualification-orientated work placements in preparation for employment (Wessels, 2014). Professional Councils like the Health Professions Council of South Africa also play a role in curriculum development in

professional degrees by stipulating the amount and the type of model of WIL relevant to the qualification (CHE, 2011c; Cilliers and Smit, 2014).

According to the 2013 Higher Education Qualifications Sub-Framework (HEQSF), WIL is characteristic of vocational and professionally-oriented qualifications and may be incorporated in any programme on the framework. WIL structures recognised by the HEQSF include simulated learning, work-directed theoretical learning, problem-based learning and workplace-based learning (HEQSF, 2013). The type of WIL in a qualification is dependent on the nature and purpose of the qualification (HEQSF, 2013). WIL is said to benefit the students in that it improves academic performance, communication skills, team work, career benefits, and professional identity, develops positive work values and employability and enables students to graduate (CHE 2011b; Wessels, 2014).

In order for the WIL programmes to yield maximum positive results, curricula need to align the course outcomes with the outcomes of workplace-based learning (CHE, 2011b). This means that during curriculum development it is imperative to ensure that the course learning outcomes, practice-based learning as well as assessment need to be aligned (CHE, 2011; Stirling *et al.*, 2016). Since WIL forms part of a qualification..., "it is important to ensure that the volume of learning allocated to WIL should be appropriate for the qualification and the cognitive demands of the learning outcomes and assessment modes within the qualification levels" (HEQSF, 2013).

The CHE discussion document on the HEQF review (2011) and Stirling *et al.* (2016) further indicate that the curricula can be aligned through designing activities that require integration of disciplinary, workplace relevant knowledge and skills. The alignment of curricula may be done through bringing professional practice to the core of the curricula to act as the organiser for both disciplinary; theoretical and practical learning while recognising that some workplace practices may be out of step with theoretical knowledge (HEQF: 2011; Stirling *et al.*, 2016). In other words, the curriculum needs to be designed in such a way that what is taught in class is relevant for the world of work, meaning that the skills and the theoretical content taught in class may be put in practice in the work place.

The opposite is true for workplaces in that the WIL stakeholder must ensure that the manner in which they operate is in line with the teaching. This means that in order to achieve the goals of WIL, the theoretical content needs to be aligned to the practical content as well as the demands of the WIL placements. Student placements may also be utilised in an authentic professional context as learning environments in which the students engage in meaningful workplace activities that are designed to achieve enhanced and integrative learning (Council on Higher Education, 2011a; Cilliers and Smit, 2014; HEQSF, 2013). For example, allowing a student to take the lead in patient management where the student is the primary respondent like it would be after she graduates. In this case the student is role playing what she would be doing after obtaining the qualification.

The WIL in a South African context clearly indicates the importance of participating in WIL programmes. However, as indicated in section 2.1, implementation of WIL is accompanied by challenges. Successful implementation of the WIL programmes is heavily dependent on access to adequate funding; lack of funding has been noted to be a challenge (Wessels, 2014). Funding is necessary to enable WIL coordinators to effectively monitor students at workplaces (Wessels, 2014). Lack of infrastructure necessary to implement WIL as well as a shortage of field experts, have been identified to impact WIL negatively (Council on Higher Education, 2011a: 16).

The shortage in infrastructure as well as the mentors may result in overcrowding at sites of WIL and that may make the cooperative participants reluctant to become involved in WIL (Council on Higher Education, 2011a: 16). An example of such an incident is when students from institution A go to a WIL placement and they find that institution B has also placed students in the same area on the same day. This creates a competitive environment where students have to compete for the attention of mentors and sometimes may not have a space to work in cases where the WIL placement area is not big enough to accommodate them. This may be a situation across the big South African cities in that there are many Universities offering courses in the Health care sciences like Medicine, Nursing, EMC, Clinical Associates to name a few. The student grouping from above disciplines are placed at the same hospitals at the same time to be mentored by the same people further compounding

the overcrowding. It is also possible that the clinical site itself is too small with a limited number of available mentors.

2.5. Work Integrated Learning (WIL) in the Health Sciences

In South Africa, Higher Education is influenced by the professional councils (Council on Higher Education (CHE)2011b). The professional councils contribute to curriculum development and student assessment in the respective field, they also guide and support good practice in teaching and learning (CHE, 2011b. Student learning is enhanced through innovative curricular, pedagogy and assessments (CHE, 2011b). In Medical Schools across South Africa, enrolled students participate in some form of WIL prescribed by the institution depending on the year level of study (Burch, 2007). There are eight Medical Schools in South Africa and these schools are funded by the South African Government (Burch, 2007). The South African Government funding is provided through a subsidy that is stipulated based on the number of registered students (Burch, 2007). Students also pay their own tuition in addition to the subsidy. Medicine is studied over a period of six years. This period is divided into pre-clinical years and the clinical years.

During pre-clinical years, students study basic Sciences, Anatomy, Physiology, Pharmacology and Microbiology to name a few (Burch, 2007; Garcia-Jordan, Bhat, Blanco Blanco. and Kwizeza,, 2011). The clinical years are structured as clerkship attachments (apprenticeship) where students are attached to different clinical units representing different clinical disciplines. The disciplines include internal medicine, psychiatry, ophthalmology, orthopaedic and general surgery, family medicine and obstetrics and gynaecology (Burch, 2007; Garcia-Jardon *et al*, 2011). All the medical schools engage students in a form of WIL. The form of WIL model involved is referred to as clinical clerkship attachments as well as internship (Burch, 2007; Garcia-Jardon *et al.*, 2011). During the clinical clerkship attachments; students are scheduled into different clinical units. The units are divided based on the particular disciplines within medicine. During clinical clerkship medical students are required to observe medical procedures, assist in performing the procedures and, where necessary, perform the procedures themselves under the supervision of a qualified

medical professional (Burch, 2007;Dornan, Tan, Beshuizen, Gick, Isba, Mann, Scherpbeir, Spencer, and Timmins, 2014).

Since the 1950s medical students have participated in a one-year internship after graduation as medical practitioners (Bola, Trollip and Parkinson, 2015; Nkabinde *et al.*, 2013). The internships were regulated by a governing body called the South African Medical and Dental Council (SAMDC) (Bola *et al.,* 2015) and there was no need to submit proof of having participated in the internship. After 1994 student doctors were required to participate in a formal internship before they could be registered as independent medical practitioners (Bola *et al.,* 2015; Bornan *et al.*, 2014). The internship was regulated by the HPCSA. The internship was aimed at ensuring that the graduates acquire the skills necessary to enable them to practice independently (Bola *et al.,* 2015; Nkabinde *et al.,* 2013).

The clinical clerkship varied in duration from four to eight weeks. Following those six years of training, the medical graduates are expected to participate in a two-year compulsory internship (Nkabinde *et al.,* 2013). The internship is prescribed by the HPCSA in conjunction with the National Department of Health. Failure to adhere to the prescripts will result in an inability of the graduates to register with the HPCSA as independent practitioners (Nkabinde *et al.,* 2013). The policy on Medical Education and Training as stipulated is said to be excellent; however, the practice in real life faces challenges (Nkabinde *et al.,* 2013). In 2015, Bola *et al.* undertook a study that assessed the effectiveness and relevance of the internship. The respondents in the study indicated that the internship had significant benefits to their training, but it was not without challenges.

The challenges are attributed to the significant shortage in clinical mentors and infrastructure required to optimally support the training needs of medical students. Bola *et al.* (2015) and Nkabinde *et al.* (2013) indicated that the shortage in clinical mentors is due to the increase in the emigration of qualified doctors as well as the strict protocol for immigration of foreign medical practitioners (Econex, 2015). This results in inadequate supervision of students during WIL (Econex, 2015). Furthermore, there have been a significantly increased number of enrolments in the

medical degree (Nkabinde *et al.,* 2013; Econex, 2015). This increase in the number of students results in overcrowding in the clinical placement areas.

The South African Nursing Council (SANC) regulates the nursing and midwifery profession throughout South Africa (Republic of South Africa 2005 cited in Sibiya, 2012). The SANC sets and maintains the standards of nursing and midwifery education, training and practice (Republic of South Africa 2005 cited in Sibiya, 2012). Nursing students participate in WIL and WIL is regarded as an integral part of nursing education (Sibiya, 2012). The SANC sets the requirements of WIL and also sets the recommended duration for WIL in a specific clinical ward (SANC 1997 cited in Sibiya, 2013). In Nursing Education and Training students participate in WIL in the form of preceptorship, mentorship and clinical accompaniment (Lekhuleni *et al.,* 2004; Sibiya, 2012). Preceptorship is a one to one reality based clinical experience where students are taught by a registered professional clinical nurse for a specific period of time (Barret and Myrick, 1998; Sibiya, 2012). During clinical accompaniment students are assisted and supported by registered nurses in a clinical environment (Mtambo, 2009 cited in Sibiya, 2012). Nursing educators' responsibilities are to ensure that nursing students are accompanied by qualified and experienced nursing professionals during clinical placements (Sibiya, 2012).

The three forms of WIL are aimed at developing the intellectual, cognitive and critical thinking skills required to enable them to function independently after graduation (Sibiya, 2012; Lekhuleni *et al.*, 2004*).* Participation in these models of WIL for both nursing and medical education is important for development of the practitioners (Lekhuleni *et al.,* 2004). This makes the graduates ready to function independently in the work force. It improves their self-confidence and it improves retention in that it keeps students interested in their studies (Lekhuleni *et al.,* 2004; Sibiya, 2012). Although the benefits of the practice in both career paths are highlighted, the implementation of these models is not without challenges (Sibiya, 2012). Shortage of clinical mentors in both fields remains a critical challenge. A study by Lekhuleni *et al.* (2004) on WIL in the Limpopo Province revealed that WIL was not perceived as valuable by some nursing students (Lekhuleni *et al.,* 2004). This was because in most cases the nursing students were perceived as the work force (Lekhuleni *et al.,* 2004; Ojaha, 2010 cited in Sibiya, 2012). This means students ended up managing

patients and performing procedures without the supervision of a clinical mentor. The majority of the participants in the study gave a positive response (Lekhuleni *et al.,* 2004).
In a South African study conducted by Carlson, Kotze and van Rooyen (2003), the findings indicated that the students experienced uncertainties. The uncertainty experienced by nursing students was due to a lack of accompaniment and the fact that the nursing staff at clinical placements were not aware of the needs of the students (Sibiya, 2012). The lack of accompaniment is said to be linked to poor clinical competency (Magobe, Beukes and Muller, 2010 cited in Sibiya, 2012).

In both medicine and nursing education the impact of the shortage of clinical mentors may have a fatal impact on the patients. Nursing students and medical students may end up performing procedures on patients unsupervised which poses risks to the patients should there be complications. Bola *et al*. (2015) reported that in some cases the interns perform the procedures on patients for the first time without the supervision by a qualified practitioner. In some cases, the theoretical and practical knowledge that is given to nursing students by nursing educators is not in line with what is being practiced (Magobe *et al.,* 2010 cited in Sibiya, 2012). Unit supervisors and the student nurses end up in disagreement with regards to clinical approaches to medical situation.

2.6. Work Integrated Learning in the BEMC

As part of their curriculum, pre-hospital Emergency Medical Care students in the four-year BEMC degree programme undergo theoretical training through lecture sessions as well as practical sessions in the practical laboratories (CPUT, 2016; Khoza, 2016). The practical laboratories are made up of simulation and skills laboratories which are divided into skills stations for individual skills such as establishing intravenous access and splinting a fracture bone (CPUT, 2016; Khoza, 2016). In the simulation laboratories the students are given scenarios and they learn to combine the individual skills learnt in order to treat a sick or injured person. Once the students are deemed competent in the individual skills and simulation laboratories, they are afforded opportunities to participate in WIL platforms during their period of studies (CPUT, 2016; Khoza, 2016). They perform the skills on live

patients under the supervision of a qualified medical professional. The students are scheduled to go on the road and hospital shifts as well as laboratory shifts in order to practice clinical skills necessary to enable to become emergency care practitioners at the end of their four years training (CPUT, 2016: 2). This means that for each of the year levels there is allocated time for simulation training and assessment, followed by a period spent at sites of WIL.

The skills are assigned based on the year level of the programme from basic skills such as administration of oxygen to more advanced skills such as establishing a surgical airway. The skills are first demonstrated in class in a simulated setting and then students will observe on real life patients in clinical settings and where applicable the students will perform the skills themselves on the patients under supervision (Abery *et al.*, 2015). The clinical settings involve in hospital, ambulances and also along the side of the road. All students across all four-year levels may be assigned to any of the abovementioned clinical areas; however, the difference may be the qualification of the clinical supervisor or the hospital department. Different clinical supervisors possess different skill sets depending on their qualifications, and the different hospital departments may expose students to opportunities to perform certain skills.

2.7. Emergency Medical Care in South Africa

Emergency Medical Care (EMC) is a fast-growing profession in South Africa. According to the Republic of South African Constitution (1996) emergency care is defined as “an evaluation, treatment and care of an ill or injured person in an emergency care situation and the continuation of treatment and care during the transportation of such a person or between health establishments”. From the definition of EMC above the researcher defined emergency care in a pre-hospital setting as providing emergency medical care to the sick and injured in situations where the patient is unable to take him/herself to the nearest medical care facilities.

In the 1970s South Africa emergency care was restricted to basic life support and transport to the nearest emergency department (MacFarlen, van Loggereberg and Kloeck, 2005; National Emergency Care Education and Training Policy (NECET

Policy) (Department of Health: South Africa; 2017). Even though basic life support was the only level of care provided, it was not equally distributed in that the majority of the basic life support practitioners were allocated to big cities leaving the rural areas and townships inadequately capacitated with practitioners. In 1985 a three-tier emergency care structure was developed (MacFarlen *et al.,* 2005; Department of Health: South Africa; 2017 ; Kubirske, 2014).

This structure was regulated by a professional body called the Health Professional Council of South Africa (HPCSA) (MacFarlen *et al*., 2005; Department of Health: South Africa; 2017). The structure was made up of Basic Ambulance Assistance (BAA), Ambulance Emergency Assistant (AEA) and Critical Care Assistant (CCA). The BAAs were trained in Basic Life Support and the training took one month to be completed (MacFarlen *et al.* 2004; Department of Health: South Africa; 2017). BAAs provide the basic non-invasive level of care which is restricted to the use of an automated external defibrillator (AED), control of bleeding and cardiopulmonary resuscitation (Van Huyssteen, 2016). After practicing as a BAA for a minimum of one thousand hours and successful completion of AEA selection, BAAs became eligible to become an AEA. To be an AEA the BAA must be enrolled into an Intermediate Life Support (ILS) course which takes four months to complete (MacFarlen *et al*. 2005; Department of Health: South Africa; 2017).

After successful completion of the Intermediate Life Support (ILS) course, the AEA continues to practice skills acquired during BAA in conjunction with the newly acquired skills of manual defibrillation, establishments of intravenous lines as well as administration of other drugs (Van Huyssteen, 2016). AEAs must obtain a minimum working experience of one thousand hours (roughly six months) and pass the CCA selection to become eligible to study CCA. The course is nine to twelve months long. Once a person qualifies as a CCA the scope of practice is amended to advanced life support (Van Huyssteen, 2016). The emergency care they provide includes advanced airway manoeuvres like endotracheal intubation, insertion of a nasogastric tube as well as the use of drugs to treat patients in emergency situations (Van Huyssteen, 2016). A detailed scope of practice for the courses can be accessed on the HPCSA website (HPCSA: Online).

The growing needs of South Africans for emergency care made it apparent that the Emergency Medical Care professions must be aligned to other health professions in South Africa (Van Huyssteen, 2016). The professional qualifications needed to be established, regulated and registered by the HPCSA (Van Huyssteen, 2016). The National Diploma Emergency Medical Care was introduced at Technikons (now called Universities of Technology or Comprehensive Universities[6]) in 1986 (MacFarlen *et al*., 2005; Department of Health: South Africa; 2017; Kubirske, 2014). The aim of the qualification was to replace short courses and equip graduates with capabilities in rescue, advanced life support and the knowledge to work as independent emergency medical care practitioners (MacFarlen *et al*., 2005; Department of Health: South Africa; 2017). The new qualification provided matriculants with opportunities to study emergency medical care without having to go through the hierarchy of the short courses.

After the 1994 elections, South Africa was declared a democratic country. The country incorporated all the former Black homelands, and was divided into nine provinces (MacFarlen *et al.,* 2004; Department of Health: South Africa; 2017). This division disadvantaged many rural areas because resources were not sufficient to meet their needs of emergency medical care (MacFarlen *et al.,* 2004; Department of Health: South Africa; 2017).

The rural areas were disadvantaged because even if the paramedics were equally distributed, the distances to the nearest emergency departments were long (NECET Policy, 2015). The long-distance patient transport warranted the need for emergency medical providers to be capable of providing emergency medical care independently and provide an increased level of clinical care (MacFarlen *et al.* 2004; Department of Health: South Africa; 2017).

A higher level of training was then introduced in 2001 in the form of a 2-year part time qualification called the Bachelor of Technology in Emergency Medical Care (B. Tech EMC) (Emergency Care Society of South Africa (ECSSA), 2012; Kubirske, 2014). The pre-requisite of the B. Tech EMC is a National Diploma Emergency

[6] Matriculant: a person who is at his/her final year (i.e. 12th year) of high school.

Medical Care (MacFarlen *et al.,* 2004; Department of Health: South Africa; 2017, 2015; ECSSA, 2012; Kubirske, 2014). In 2007, the South African Minister of Education published the Higher Education Qualification Framework in terms of section 3 of the Higher Education Act (Act no 101 of 1997) (National Qualifications Framework (NQF) Act 67 of 2008). The objectives of the NQF are to create an integrated national framework for learning achievements, facilitate access to and mobility and progression within education and training, enhance the quality of education and training as well as accelerate the redress of past unfair discrimination in education, training and employment opportunities (NQF Act 67 of 2008).

For a qualification to be registered on the NQF, it must meet criteria set in the NQF; it is required to demonstrate the programme's fitness, intellectual credibility, coherence and capacity to articulate (HEQSF, 2013). Short courses could not be registered on the NQF and were therefore not NQF complied and it was difficult to monitor the courses (Kubirske, 2014). Many of the institutions offering short courses qualified a high number of Basic Ambulance Assistants because it was difficult to regulate production (Kubirske, 2014). This situation prompted the changes in EMC offerings which aimed to address the objectives of the NQF Act indicated above.

In August 2012, the Health Professions Council of South Africa's Professional Board for Emergency Care announced its intention to discontinue the offering of the abovementioned short courses as well as the NQF aligned ND: EMC and that they would be replaced by National Qualification Framework aligned qualifications (ECSSA, 2012). This happened after the Education and Training Quality Assurer (ETQA) and the Standard Generating Body (SGB) revised the existing learning outcomes of the short courses and Higher Education qualifications (ECSSA, 2012).

In January 2014, the Minister of Health Doctor Aaron Motsoaledi announced the deadline for the discontinuation of offerings of the short courses as well as the ND: EMC (Taylor, 2014: Online). The deadline was set to be on December 2014. In May 2014 a withdrawal notice was issued by the DOH enabling colleges to continue offering short courses till further notice (Health Professions Act Government notice No 37688). On the 27 of January 2017 a government notice against the Health Professions Act 56 of 1974, stipulated that colleges may continue to offer EMC short

courses until twelve months after the date of publication (Health Professions Act Government notice no 40577). The practitioners are given the same amount of time to register with the HPCSA.

A new three-tier NQF-aligned structure of Emergency Medical Care was introduced by the Professional Board of Emergency Care, a branch of the HPCSA (ECSSA, 2012). The structure consists of a one-year national certificate, the two-year Diploma in Emergency Care (formerly Emergency Care Technician) and the four-year professional degree Bachelor of Emergency Medical Care (ECSSA, 2012). For the purpose of this research the focus will be on the four-year BEMC programme.

2.8. Clinical Practice: A Subject in the BEMC Curriculum that Gives Expression to WIL

CP is defined as any work done by a doctor or medical professional that relates to the care of an individual patient (Medical Council of New Zealand, 2005: 1). Emergency Medical Care is a mother subject in the BEMC programme.
It is present in all four levels of the BEMC. It is divided into three daughter subjects and they are Emergency Medical Care Theory, Emergency Medical Care Practical and CP (Cape Peninsula University of Technology (CPUT, 2016). Emergency Medical Care theory is a theory subject where students are taught different pathologies of different diseases as well as mechanisms of injuries (CPUT, 2016). In addition to that, students are taught how to treat the diseases and injuries. The assessments for this subject are written assessments. Sources of the information include textbooks and journals which contribute to evidence-based education (CPUT, 2016). In Emergency Medical Care Practical students are taught individual life-saving skills as well as how to incorporate the individual skills in a simulation where students are given a scenario and an opportunity to use the skills to simulate treatment of a patient on a manikin (Khoza, 2016; Gwavu, 2016).

In CP students are scheduled to go on different areas of work-based learning like hospital departments and emergency care services (CPUT, 2016). Competence in the subject is acquired through attendance of scheduled WIL periods, management of a stipulated number of patients, acquisition of skills relevant to a particular year

level as well completion of reflective journals and case studies (University of Johannesburg, 2017). The health professions council of South Africa and South African Qualifications Authority set out the scope of practice for BEMC students relevant to the year levels (). A set number of hours are allocated per year level with a list of skills they need to acquire under the supervision of a clinical mentor. The number hours spent on clinical practice differs with year levels (). The frequency of attendance of the clinical practice attachment also differs, with some classes attending once a week while others have two week blocks of clinical practice. All skills are performed by the student are signed off by the clinical mentors and attendance registers are also signed by clinical mentors (UJ, 2016). There also clinical reflections and case studies that students need to complete in order to fulfil the requirements for clinical practice (UJ, 2016).

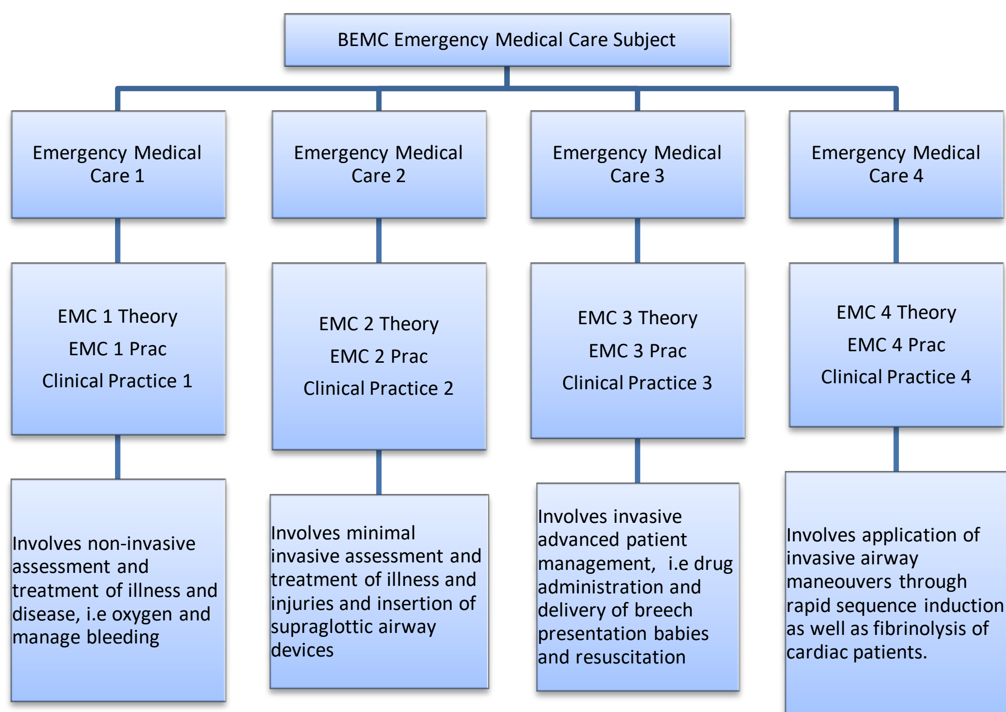

Figure 1: Diagram of the BEMC Emergency Medical Care subject

Figure 1 above summarises the emergency medical care subject structure relevant to the specific year level and details the composition of the emergency medical care training. The subject offered as seen in the specific years are co-dependent, meaning that the student needs to pass the whole subject composition in order to

progress to the next year level of studies or graduate. If a student fails one of the subjects that make up emergency medical care, he/she will have to repeat the year registering all the subjects that make up emergency medical care. It is also important to note that emergency medical care and its daughter subjects are not the only subjects that make up the course content in Bachelor of Emergency Medical Care.

2.9. Summary

In this section the definition of WIL was addressed, the differences in WIL models were also highlighted. WIL in the South African context as well as how other fields of study in the health sciences perceive WIL were also discussed. This chapter also elaborated on the history of Emergency Medical Care Training in South Africa and how it has changed till now. The issues surrounding the need to change the training in EMC were also discussed and lastly CP subject in the context of EMC training and how it relates to WIL is also discussed. There is a paucity of research on how WIL platforms are experienced by emergency care students. This study is likely to contribute to this lacuna.

The next chapter focuses on the methodology of the study.

CHAPTER 3
RESEARCH METHODS AND DESIGN

3.1 Research Design

The research design used for this study was qualitative with an interpretative (i.e. hermeneutic) phenomenological conceptual framework. The research intended to explore the everyday experiences of the participants, highlighting the similarities and differences that exist amongst the participants' experiences (Cresswell, 2006; Rossman and Rallis, 1998; de Vos, Strydom, Fouche and Delport, 1998). In this research the participants were third- and fourth-year students registered on the BEMC programme, as they undergo WIL in CP. The research determined how they experienced and perceived CP as a subject in the BEMC curriculum. According to Leedy and Ormrod (2001) and Merriam (2002), qualitative research is most suited for exploring experinces of the participants, obtaining participants' understanding, and deeply understanding experiences of the participants. This type of research allowed the researcher to ask broad questions and obtain word data from participants as well as identify what the participants think about their reality (Cresswell, 2007; Merriam, 2002; Leedy and Ormrod: 2001; De Vos *et al.,* 1998).

It also enabled the researcher to be the primary instrument in data and obtain his/her data by means of interviews and analysis of existing data (Merriam: 2002; Leedy and Ormrod: 2001). Lastly, qualitative data is rich in detail, in order to thoroughly analyse the data collected, sample sizes need to be kept small unless the researcher intends to spend years on it (Ritchie and Lewis, 2003, Creswell, 2007).

Phenomenology is a research paradigm in qualitative research that is concerned with the lived experiences of the participants. The findings are based on the analysis and commentary on individual situations (Yuksel and Yildirim, 2015: 14).
The findings cannot therefore be generalised to other situations except those that are being studied (Yuksel and Yildirim, 2015). Yin (1993) and Hamel, Durfour and Fortin (1993) also agree that it is not possible to generalise qualitative research (Meyer, 2000: Online). However, Meyer (2000) continues to say that partial generalisation is possible in cases where the populations have similar characteristics

(Meyer, 2000: Online). Meyer (2000) cautions against making generalisation the primary aim of the research.

3.2 Research Method

The method utilised to obtain data was a semi-structured, one on one face to face interview where I generated questions which were used as interview prompts which served as a guide with topics and questions to be asked. The prompts were necessary in that they helped theme allowed me to steer the conversation and ensure the subject of the interviews remained relevant to the research.

During the interviews, the interview guide was not used in any order I allowed the conversation to flow however, the prompts we used to ensure the conversation did not deviate from the topic of investigation. The advantages of semi-structured interviews are that they have a high rate of return. The risk of unanswered questions is minimized, flexible and offers the researcher the ability to control the order of questioning (Alshenqueeti, 2015). Though the guide provided the scope for the interview, I sometimes had to rephrase the questions in some cases explanations were offered in a different language to ensure the participants better understand the question. The disadvantages of semi-structured interviews are that they are time consuming, they are not anonymous, and they have an increased potential for researcher bias (Alshenqueeti, 2015). The process of data collection was time-consuming; total of 27 interviews took place over a period of a week.

3.3 Participant Selection

With qualitative research the sample size was not the primary factor, saturation was (Ritchie and Lewis, 2003). In qualitative research generally, sample sizes are relatively small because the data analyses, if done accurately and in-depth, are time-consuming (Creswell, 2007). Data were collected up to a point where the data collection process did not yield any new evidence (Ritchie and Lewis, 2003; Creswell, 2007). Qualitative research is not concerned with incidence or prevalence; it did not require the researcher to ensure that sample size was of sufficient scale to

determine statistically significant discriminatory variables or estimates (Ritchie and Lewis, 2003, Creswell, 2007).

The sample population consisted of HPCSA registered BEMC students in the third- and fourth-year of study, at a South African University as well as lecturers involved in the BEMC clinical practice. The lecturers are not specifically participants in WIL, but they plan and oversee the CP compliance in the programme. The reason for the selection of senior students is that these students are at senior year levels and the researcher believes that at this level of study, they have brought with them the experience and insight of the CP subjects of the first and second years. They therefore would be able to reflect and comment on the CP over all the years up to their current level of study.

A combination of the third- and fourth-year classes of the BEMC course was sixty students, thirty per class at the time of the study. The researcher intended to interview a sample of twenty students which was a third of the population of the two classes. During data collection the researcher did in fact interview the twenty students; until evidence of data saturation was present. Saturation of data happened when no new ideas emerged around the twelfth interview. The general idea was the same perception of clinical practice was the same with minor variations. The student grouping that participated in the research was the fourth years as the third years were mostly committed during the period of data collection. With regard to the lecturers, the researcher interviewed four CP coordinators on the BEMC programme. CP coordinators schedule the clinical placements. They form the link between areas of clinical learning as well as the students. If there are any challenges or strengths related to CP, they will be informed and be in a position to act on the issues.

The participating university had a clinical coordinator with four clinical instructors, where one was dedicated to each year level of the course. This proved beneficial to the research in that it meant that the lecturer grouping was in fact the experts of CP and the fact that they were each involved with a particular year meant that they would be able to share their experiences specific to an academic year, where necessary.

Purposive sampling was used in this study. It is a sampling technique also called judgemental sampling, characterised by a deliberate effort to gain a representative sample by including groups or typical areas in a sample (de Vos, Strydom, Fouche and Delport, 2005; Padilla-Diaz, 2015). In this type of sampling the researcher had enough knowledge of the topic to choose a sample of experts and participants knowledgeable enough to answer the research question appropriately (Creswell, 2007; Padilla-Diaz, 2015). The research scope is WIL in CP, it was important to have a sample that was well informed on clinical practice, with experience. As such a criterion needed to be set as described above.

Posters were placed on the notice boards at the chosen South African University for potential participants to see. The posters contained information regarding the research such as the aim, significance, and procedures related to the study. The poster had the contact details of the researcher where potential participants could contact the researcher with regard to participating in the study. The researcher also did a short recruitment presentation for the lecturers and senior students to encourage interest in participating in the study.

3.4. Data Collection

When preparing for the study, I was aware of my existing knowledge about the phenomenon being investigated. To assess whether the knowledge was, indeed, temporarily set aside, I had to constantly ask myself if there were possibilities for new evidence to be obtained. If affirmative, then I carried on with the research as suggested by Chan *et al.* (2015).

Data was collected using semi-structured one-on-one, face-to-face interviews. The interviews were centred on experiences of participants of the CP subject. The interviews took place during lunch and tea breaks so as not to interfere with the academic schedules. The interviews took place during the day on weekdays between 08:00 and 16:00. No interviews took place during school holidays and weekends or after hours. Refreshments were provided during the interviews. As the interviews took place during breaks this was to make it convenient for the participants to participate in the study without skipping their lunch or tea breaks.

The aim of the interview was to determine perceived strengths and perceived weaknesses of the CP subject at a South African University. Participants received all the information they needed about the study and they were required to complete a consent form in order to participate in the study. Information was given verbally as well as on paper highlighting aims and background of the study. All participants took part in the study of their own accord and they could leave the study at any given time in the study should they choose to with no consequences, judgement and no detriment to their studies or employment.

During data collection I ensured bracketing by safeguarding that the way the questions were asked did not lead the participants (Chan *et al.*, 2015). The same authors, Chan *et al.* (2015), suggest that during the interviews, interview guides be used to steer the conversation but not to dictate the interview. The interviewer must therefore not ask leading questions (Chan *et al.*, 2015). The interview guides covered the areas being investigated but they did not hinder the introduction of new information by the participants, as stipulated by Chan *et al.*, 2015.

The aims of this research were to identify the perceived strengths and weaknesses of the CP subject and, consequently, to inform recommendations to enable the CP subject offerings in the four-year BEMC degree at a South African University of Technology.. The four South African tertiary institutions offering the BEMC have CP in their curriculum and adhere to the HPCSA guidelines on WIL, it may be possible to generalise some of the findings. It is however possible that the findings may be unique to the site of the study.

The interviews were audio-recorded to enable the researcher to capture the responses of the interviewees verbatim. Audio-recordings made it possible for the researcher to refer to the interview during data analysis without losing key information.

Once the recordings were complete, I transcribed the recordings as the first level of analysis. I ensured that the interviews took place in an area that was free from background noise and interruptions. Brief notes made during the interviews formed a second form of data recording. I also wrote a reflection on each interview without

making premature conclusions. I conferred with my supervisors where required. A small pilot study with three student participants in order to test the research tool was undertaken. The aim of the pilot study was to determine if the interview guide was appropriate and to ensure that the equipment worked. It was also used to get an idea of whether or not the participants understood the content and scope of the research as well as determine if there needs to be changes made to better illicit meaningful conversations with the participants. The data collected during the pilot study did not form part of the research. Once the research was completed and approved, a copy of the research would remain at the CPUT library. The participants will also be able to obtain findings of the research directly from the researcher were they to request them.

3.5. Data Analysis

The method of data analysis utilised was thematic data analysis. This method of analysis enabled me to identify, analyse and report patterns (themes) (Braun and Clarke, 2006). Thematic data analysis intends to provide rich, detailed and complex accounts of data (Braun and Clarke, 2006). Furthermore, it was the most flexible mode of data analysis as it does not ascribe to any framework (Braun and Clarke, 2006).

Data was collected and analysed thematically by myself in conjunction with a data analysing software called NVivo 12 Pro which is a software programme that not only analyses data but also helps manage and shape qualitative data (Cresswell, 2007). The first phase of data analysis took place during the interviews. I made points the key matters that arose and grouped them together to get an idea of the general perceptions and differences in ideas from the participants. After that I made summaries of the interviews in a journal. An in depth analysis began after the data was transcribed I employed the six steps to data analysis as described by Braun and Clarke (2006) as well as the six steps as described in the NVivo 12 Pro program. The six steps as described by Braun and Clarke (2006) are as follows:

Step 1: Familiarising yourself with the data

During this step involves reading and re-reading the transcribed data and understanding that data and doing a foundational analysis.

Step 2: Generating initial codes

Here the codes are identified and features that appear interesting and meaningful are identified. During this step codes that are generated may be many and may all seem important, the researcher needs to provide context of the conversation.

Step 3: Searching for themes

In this step, the codes are collated, the relationship between the codes are evaluated.

Step 4: Review themes

Deeper analysis of the themes, the researcher identifies which themes need to be merged, separated or discarded. The data within the themes is also evaluated to determine if it correlates and clear distinctions between the themes are identified.

Step 5: Defining and naming themes.

Here the themes are refined and defined, subthemes are also identified, and a story of the data emerges from the themes.

Step 6: Producing the report

The analysis is transformed in to an interpretable piece of writing using the extracts examples that relate to the themes, research question and literature.

The six steps to data analysis as adopted from the NVivo 12 Pro are as follows:

Step 1: Review the questions and research approach

This phase takes place after the data is transcribed.

The researcher then goes through the transcribed data while making a summary of the key points and relating them to the research questions and then identify the coding strategy.

Step 2: Code for the broad topic areas

Here the transcripts are loaded on to the programme and the transcripts are used to generate codes. Codes are generated from dragging the different statements from the transcripts into a code.

Step 3: Review coding

During this step the code is relooked and what was covered under the code identified. The code is then fine-tuned

Step 4: Reorganise codes

Codes are evaluated to determine the ideas that exist within the codes. The codes are then separated or merged based on the ideas identified.

Step 5: Explore data using the codes

In step five the patterns within the data are identified and the codes are analysed. The relationships between the codes were also identified.

Step 6: Identify the themes

Themes are identified in step six.

The programme also stores data securely and consolidates data into a single folder (Cresswell, 2007). I interpreted the analysed data in order to make meaning of the findings. As a novice researcher it was important for me to ensure that I maintain accuracy in my analysis. I therefore simultaneously used both to see if I would reach the similar conclusions. I started going through the interview transcripts, familiarizing myself with the data and generating codes. This process is referred to as open coding (Braun & Clarke: 2006). This happened for all interview transcripts for all participants. I generated the codes according to their relevance to the research question and sub-question. This process is said to be theoretical thematic analysis (Maguire & Delahunt: 2017). The codes were modified, merged and some were rejected and then themes were formulated from the codes. The themes were reviewed to see if they make sense, to determine whether, or not the themes supported the data. Some themes were divided into sub-themes and similar themes were then merged.

3.6. Trustworthiness and Reliability of the Study

In this research the participants were involved in the same model of WIL in all aspects. The researched documented the lived experiences of the participants in WIL. The research identified what the participants experienced and how they experienced the WIL situation (McMillan and Schumacher, 2010; Groenewald, 2004). The trustworthiness and reliability of the study was further enhanced by using a phenomenological approach because phenomenological studies generate meaning of the participants' lived experiences through reflections and analysis of a

phenomenon, situation or event in their everyday life (McMillan and Schumacher, 2010; Cresswell, 2007).

To achieve the goals in a qualitative phenomenological study of understanding perceptions of participants' lived experiences, interviews are utilised (Savin-Baden and Major, 2013; McMillan and Schumacher, 2010; Groenewald, 2004). I am aware that this means that the data that is collected through this research design is subjective and this may lead to difficulties when it comes to establishing reliability and validity of the design (McMillan and Schumacher, 2010).

Reliability refers to how consistent will the research be in achieving the same results if repeated, while validity refers to the accuracy of the results (Cresswell, 2007). Reliability and validity is not applicable to qualitative study (Lincoln and Guba; 1985). Indicators for trustworthiness in qualitative research are said to be credibility, transferability, dependability and confirmability instead (Lincoln and Guba; 1985). Credibility is referred to as "*the accuracy of research findings where investigators attempt to demonstrate that a true picture of the phenomenon under scrutiny is being presented*" (Shenton, 2004: 63). This variable is dependent on how rich the collected data is rather than the amount of data collected. It is not always possible to access the participants in the study to verify if the data are accurate as in the case of this research. Guba (1981) described the methods which researchers can apply to ensure credibility of a research. The methods applied in this research to ensure credibility of the research was triangulation, persistent observation, peer debriefing (Guba, 1981) use of tactics to ensure honesty of participants and iterative questioning (Shenton, 2004)..

In this research three of the methods of described by Guba (1981) and Shenton (2004) were applied to ensure credibility of the study. Triangulation, iterative questioning as well as use of tactics to ensure honesty of the participants were the chosen methods. I obtained data from interviewing two groups of participants, the senior students and the lecturers involved in CP and I also obtained additional data to corroborate my findings from previous researches and other domains and policy documents discussed in the literature review. I informed the participants that they were not obliged to participate in the study and that their participation in the study

was completely confidential. During interviews I would nod and maintain a friendly smile to encourage the participants to engage in conversation. I used this as a tactic as an attempt to ensure that only genuinely interested participants participated in the study and that they are as honest as possible when answering the interview questions.

I also asked iterative questions where I probed the participants in order to enable them to elaborate on the views they had raised. Furthermore, I also gave the participants and opportunities to summarise their views at the end of the interviews (Shenton, 2013).

Transferability often referred to as external validity refers to the degree to which the data may be generalised (Alshenqueeti, 2015). This research does not seek to generalise as it is not the function popular in qualitative phenomenological studies and thus not applicable in this study. The nature of qualitative results is that they are always changing, should a researcher seek to generalise the findings to the population from which the sample was obtained, the researcher must describe the concept under which the findings must be generalised. To maintain validity of this study I needed to minimize the possibility of bias as indicated by Alshenqueeti (2013). I did minimize bias by viewing interviewees on their own merits, not seeking answers to support my preconceived notions, not misinterpreting what the participants are saying and making sure that the participants understand the questions being asked (Alshenqueeti, 2013; CIRT: Online available on https://www.cirt.gcu.edu/research_ready/qualitative/validity).

Dependability also known as reliability refers to the consistency with which the results are repeatable (Noble and Smith: 2013). In qualitative studies, for research findings to be deemed reliable a researcher must judge the truthfulness of the research with regards to the application and the appropriateness of the tools utilised and the integrity of the conclusions (Noble and Smith, 2013; Alshenqueeti, 2015). In this research the level of reliability was a concern in that my knowledge of the programme and my preconceptions put the study at risk for human error especially if there were to be bias on my part. The interviews established how the BEMC students perceived WIL in the context of CP. Perceptions differ in that even if a

group of people experienced the same phenomenon at the same time and place under the exact conditions, I cannot guarantee that the shared phenomenon or experience will be perceived and interpreted the same way by the different people. If the interviews or data collection should be repeated with the sample from the same population under the same circumstances, the potential for the results to differ is almost certain.

Confirmability is a measure of objectivity used to evaluate whether the data collected supports the findings and conclusions made by the research when evaluated by other researchers (Smith, 2007). Different researchers have different perspectives, which they might apply to the research. Qualitative research data interpretation is subjective in nature and thus it is important to have it corroborated by other researchers. This research was for submission towards a Master's degree and it underwent the scrutiny by my two supervisors. The assessors will be given access to the data should they require to. The supervisors had an opportunity to determine if the data collected was in line with the interpretation and conclusions made by myself to ensure that there were no inappropriate biases impacting the research. My preconceptions of WIL were discussed in the beginning of the study, both my supervisors were aware of my bias. However, the findings of the study were not in line with my preconceptions and there were limited opportunities for my bias to impact the research.

3.7. Ethical Considerations

As the study site was a South African University, the risk of group harm is an important consideration, which includes reputation damage to the university if the findings display the university in a negative light, emotional harm to the students should they recall traumatic events and risk of participant identification in cases where participants recall an event that is specific to them and it is known to the students and lecturers at the University. The findings and analysis of the research will not be utilised to discredit the reputation of the University, the staff and the students. Site permission was requested from the University's Department of EMC prior to the interviews. Once site approval was granted, the research proposal was

submitted to the Faculty Ethics Committee, duly registered with the National Health Research Ethics Council, for ethics approval.

The participants were not paid, manipulated or threatened to participate in the study. Lecturers and other staff members were not used to convey the information with regard to the research. The students were briefed in the absence of the lecturers to ensure that students were not coerced into participating in the research. All participants took part in the study voluntarily and they were informed that they were allowed to withdraw from the study at any point of the research, with no consequences, judgements and no detriment to their studies or current or future employment. All the interviews are confidential, only me and the supervisors have access to the audio recordings.

The research was not intended to discredit the WIL and CP policy and practice of the university nor do I wish to diminish or enhance the integrity of the CP areas involved or for them to be named. To ensure an ethical approach, I ensure that I did not harm nor enhance the integrity of the, University, the clinical learning areas and the participants by structuring the questions in a manner that was not harmful or discriminatory towards the mentioned parties.

All audio recordings were done using two digital devices which are password protected. All data collected was transferred to a laptop which is password protected and to which only I have access. In this way confidentiality is maintained. A back up copy of recordings was saved on a cloud where only I have access to it. All hard copies (transcribed data) of the interviews are stored in a locked cupboard at the researcher’s residence.

To best answer the questions during the interviews the student participants may have needed to recall previous WIL events. This may have resulted in the participants recalling events that had the potential to make them emotional. If that should have happened the participants were to be referred to Student Counselling, which was informed of their required support prior to commencement with the interviews. Fortunately, no such incident was observed during the data collection.

CHAPTER 4
DATA ANALYSIS

Chapter Three presented the research methodology of the study. In Chapter 4 the data is analysed.

The research question, as indicated in Chapter One, was: “What do BEMC lecturers and senior students perceive as strengths and weaknesses of the CP subject?” The sub-questions were:

a) What are the BEMC lecturers’ perceptions of the CP subject?
b) What is the BEMC senior students’ perception of the CP subject?
c) In what way can the perceived CP subject strengths be built upon and the perceived weaknesses be addressed?

The sample was made up of 20 senior BEMC students and all CP lecturers (n = 4). The participants were students in CP while the lecturers were the organisers and quality assurers of CP who also play an administrative role in CP.

4.1 Analysis of Data

The data was collected through face-to-face interviews which were audio-recorded. The audio-recordings were then transcribed by me. This transcription process provided me with an opportunity for first level of data analysis. I noted the general tone in which the student-participants spoke. They spoke with conviction, assertiveness and hope that their concerns relating to CP might be addressed. That renewed my passion for the research. The manner in which they participated; and their mature approach also made me appreciate the participants’ contribution. It became clear that my research was a first step into documenting CP experiences in the BEMC degree to possibly make a meaningful contribution to CP offerings in emergency medical care training. I became aware of my responsibility to the profession to complete this research. I became more determined because I was assured of the relevance and value of my research.

There were two groups of participants: one group was made up of students and the other was made up of lecturers involved in CP. The participants were initially asked one open-ended question: “How do you perceive CP?” This was followed by the other guiding questions (see Table 4.1) to help enable the conversation. The questions were aimed at addressing the research question and sub-questions mentioned at the beginning of this chapter. Below is a table with a list of questions for both groups.

Table 4. 1: Interview Guide

Interview guide for Students	Interview guide for lecturers
1. How is your shift structured? 2. What do you perceive as the strengths of the Clinical Practice Subject? 3. What do you perceive as the weaknesses of the Clinical Practice Subject? 4. Do you believe there are changes that need be made with regards to how the Clinical Practice Subject is being conducted?	1. What do you perceive the Clinical Practice subject objectives to be? 2. Do you believe the current method in which Clinical Practice is conducted optimally meets its objectives? 3. What aspect of the Clinical Practice subject is important for students to grasp, in your opinion as the CP lecturers? 4. What do you perceive as the weaknesses of the Clinical Practice Subject? 5. What do you believe needs to change with regard to the Clinical Practice subject?

Not all the questions were consistently asked during interviews. The analytical processes described in 3.5 were applicable to my research. .The data analysis process was discussed in detail in the Chapter 3. Below is a discussion on the themes that emerged.

4.2. Emerging Themes from Student Participants’ Data

The five themes that emerged from the student participants’ data are as follows:

1. How teaching and learning occurs in CP
2. Planning, monitoring and the cost of participating in CP
3. The knowledge of clinical mentors on CP
4. Students’ perceptions about learner support by the university

5. Students' perceptions on discrimination within CP

The sub-themes also emerged from the questions asked and from the discussions during the interviews. Some of the themes and the sub-themes have direct expression in the discussions. Some students give descriptions of their perception that do not have hidden meanings but are rather direct responses to questions. In such cases, I gave a narrative on the comments. To better report on the analysis of the data, the individual themes will be discussed, not the questions. Below is a table of themes and sub-themes that presented. The themes are all in essence "grounded" in the data.

Table 4. 2: Themes and sub-themes

THEMES AND SUB-THEMES	
Theme 1	**How teaching and learning occurs in CP**
Sub-theme 1.1	Conduct of clinical mentors in clinical practice
Sub-theme 1.2	Availability of resources
Theme 2	**Planning, monitoring and the cost of participating in CP**
Sub-theme 2.1	The structure and scheduling of CP
Sub-theme 2.3	Cost of participating in CP
Theme 3	**The knowledge of clinical mentors on CP**
Theme 4	**Students' perceptions about learner support by the university**
Sub-theme 4.1	Infrastructure for mental wellbeing
Sub-theme 4.2	Infrastructure for academic support
Theme 5	**Students' perceptions on discrimination in CP**
Sub-theme 5.1	Language discrimination in CP

The diagram below summarises the links that were formed between the theme and the topics that formed under a theme:

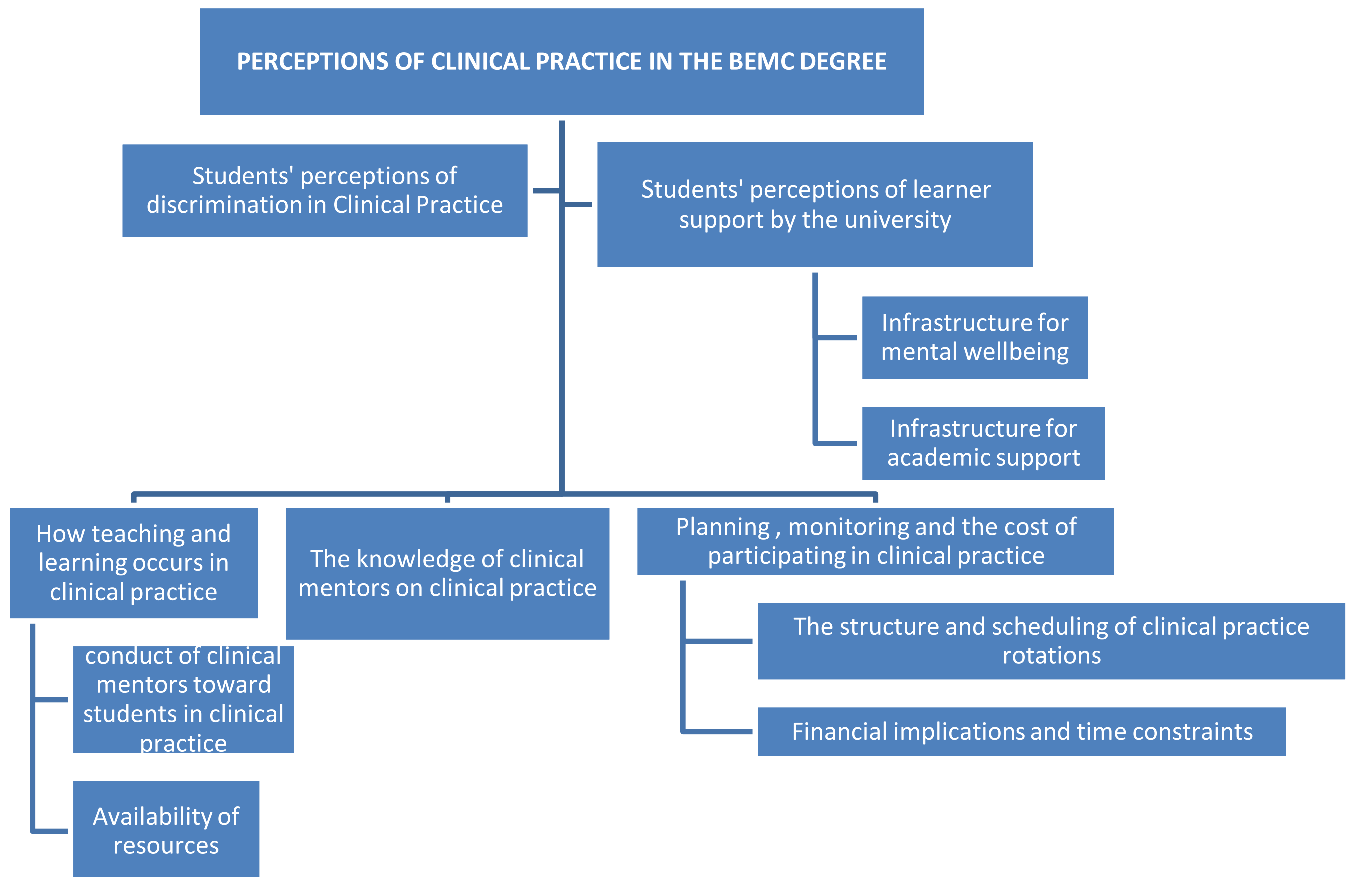

Figure 1: Summary of themes and subthemes

Figure 1 not only summarises the relationships between the themes but also shows the sub-themes that make up the theme. The themes generated also differ in prevalence. Some themes were more prevalent than others, but the researcher identified all themes regardless of their prevalence. The researcher believes that all themes warranted attention as they emerged during the interviews in response to one of the questions asked. The participants had different opinions on the themes indicated above. The next sub-section highlights the responses of the participants.

4.2.1. How Teaching and Learning Occurs in CP

"**How teaching and learning occurs in CP"** presented as a dominant theme. The participants described their experiences, factors they perceived to contribute to how they learn in clinical practice and they impact on their overall clinical practice experience. The sub-themes that emerged from the theme were the conduct of

clinical mentors towards students and the shortage of clinical mentors in clinical practice. Conflicting ideas emerged in the theme. Discussion on the sub-themes that make up the theme is described below.

The majority of the participants reflected on how they learn through CP and that it contributed positively towards their education while two participants indicated (rather surprisingly) that they have "not learnt anything" through CP. Participants A, B,E,G,H,J,K,M,N,O,P,Q and T indicated that with CP they learn by doing (from experience), and reflections on incidents that come about during clinical learning attachments. This is supported by the statements in Table 4.3 below:

Table 4. 3: Student participants' responses about the positive impact of CP

Participant Pseudonym	Responses about the positive impact of CP
Participant A	*"over the years once you have learned more it has becomes more fruitful because you can discuss more the discussion that we have and the briefing and reflections afterwards have always been good"*
Participant B	*"It definitely helps that we learn throughout the year so when we discuss work in class you can relate it to um to what you have learnt or on the road or you when discuss similar cases with paramedic the other thing I think is that you um I also get exposure to work with different paramedics and different healthcare providers if it's hospitals if it's nurses and paramedics*
Participant C	*"They (the lecturers) try to make go on the road after you have gotten some part of the theory to whatever you are gonna be doing. Because have done paediatrics yet it has been reserved for some time in the year they've only practice in the emergency room or on the road and see how it is done there. For now we are starting with road shifts which is we have been doing since first year. It is only now where we are working with "* *"By the time you get to fourth-year you are well vested on what is going on, how this is done and how to relate to patients which is something that you learn on the course. It something that doesn't come naturally to everybody"*
Participant K	*"I have learnt a lot since first year, new stuff more especially in class, in the labs, the skills labs more than on the road. What we have been taught in class, you find out the practice is different from how we are taught in class"*
Participant E	*"I believe clinical practice is a good thing because firstly it gives us exposure that gets you familiarised with the places that you will be working with is a good initiative how they started it. But now having been there now and how I felt about it now is totally different"*

Participant G	*"You get to learn from people who have been working on the road for many years and who have a lot more experience than you do and yeah I think that's about it."*
Participant H	*"Like I said being able to learn practically what we learn in class."*
Participant M	*"It's hands on you learn with experience you have mentors, people you learn from and whole variety of characters and levels of experience which you can also gain from their knowledge and lessons they have learned."*
Participant N	*"I think I think it's very valuable experience that maybe they need to just give the people we are working with like a little bit of a briefing to say what is it that we do for example like now in third year this is what we are expected to achieve this year and these are the limitations like when you are in third year you can't work on neonates whatever it is you know. otherwise you get I wouldn't call it pressure but there is some pressure involved with when you are in hospital and you get asked to do a skill you haven't had the opportunity to do this skill yet in class but you are given an opportunity to do this skill in hospital and then they just say it's fine now you can do this skill I know that they're starting to do that in hospital and it helps a lot"* *"I would say the fact that there are so many different options available to us for where we work because you get exposure to say government and private"*
Participant Q	*"You get to make more sense of what you are learning in class when we actual see a similar patient and the things that we would have never thought of asking or trying to find out actually when you get to the patient like there's little things that you now noticed that you never would have thought of like when you are doing a transfer things like do you connect the ventilator before or after things like that. Things you would never would have thought of if you only practiced in class cause now you are with an actual patient it becomes relevant"*
Participant T	*"I've learnt a lot in uhm because it also take one's enthusiasm or willingness to learn you because you must ask them you know, you can't just stand. So it has been good despite those certain facilities. If you get exposed to emergency calls which is the more you book in an emergency department the more the better the exposure, compared to when you are working at the on the vehicle because there's not always exposure you know. For instance if you work in theatre, you get to intubate the actual patient and you get to, to sort out getting them the real thing feel of things compared to doing them according to the books "*

The responses of the participants show that the general consensus is that students perceive that CP is an important part of the course and of their journey towards becoming emergency care practitioners. The students seem to understand why CP was implemented and that the role of the subject is to their benefit and establishment of the professional practice beyond studying. This was apparent in the way they described their perception of CP above. They indicated how CP provided them with a real time practical learning platform. Some students reflected on how CP impacts their professional life and appreciated the differences that exist within CP domains. These findings resonated with the literature by CHE (2011a), Kramer and Usher, (2011) Abery *et al*., (2015); which indicates that WIl helps students learn from real-time experience, improving their confidence and allowing them to acquire skill they need to be practitioners Participants' responses showed that they have regard for fulfilling the requirements for the course, they are also afforded opportunities to learn the industry traits related to management styles, available resources and industry cultures. CP is said to give them an idea aware of what will be expected of them (Coll *et al.,* 2009) and the workloads and pressure that comes with being an emergency care practitioner after graduation. From this data it emerged that the majority of students are getting the best value out of CP and that they understand its relevance to their education.

4.2.1.1. Conduct of the Clinical Mentors Towards Students in Clinical Practice

The participants reflected on their accounts of CL, describing conduct of clinical mentors and how it affects their clinical practice experience. Participants A, C, K, O and S commented on the positive response they received from working with the clinical mentors while participants A, D, E, K and S reflected on their negative experiences when working with clinical mentors. Participants A, C, K, O and S explained how the staff welcomes them and that they took time to orientate them on how they operate which provided a good learning environment and promoted learning.

The way the students described their experience showed that such shifts were memorable to students and the attitude of clinical mentors towards the students

might have helped students become at ease and more likely to participate in patient care. This may have encouraged students to participate in daily activities with the clinical mentors as they would have been made aware of the working protocol of the service. This may have not only improved the mood of the students; but the students might have been stimulated and encouraged to learn from mentors through observation of patient care and practice and thus learn from the experience. The students may have been also be more inclined to volunteer to assess and treat patients, practicing learnt skills and performing procedures on real-life patients for the first time. A positive attitude from the students may in turn encouraged clinical mentors to seek additional opportunities to teach (Raftery and Clynes: 2008; Schneider and Stier, 2006). In hospital mentors offered additional opportunities by eliciting conversations on topics relevant to their studies and possibly seeing more patients than they would have if they did not have students with them.

Participant U revealed that there are mentors specifically in the pre-hospital environment who go the extra mile to help create opportunities to learn. These mentors inform the dispatch centres and request them to dispatch them to as many calls as possible even to areas outside their geographical boundaries to enable maximum exposure for students. On the other hand, Participants A, D, E, H, K, L, P S and U reported contradictory encounters when working with clinical mentors in Table 4.10 below:

Table 4. 4: Student participants' responses about the students' perceived negative encounters with clinical mentors

Participant Pseudonym	**Responses about the students perceived negative encounters with clinical mentors**
Participant A	*"a lot of people they don't want to students so your experience most of the time,"* *"some people they don't wanna teach you they don't enlist to be there themselves, so they don't go for calls"* *"If people aren't interested in having students, not interested in teaching and willing to go the extra mile it's really difficult to get anything done. I'm not only speaking about pre-hospital me also in hospital like I really don't see a point in working in ICU unit I really feel is a waste of time you sitting there for 12 hours and all you do is observations."*

Participant D	"*There has been times when you when you are with crews that don't want to participate or they don't like students because in the past they have had bad experience with students' attitude and then they paint everybody with the same brush. So once the student comes on they tend to neglect you or if it's a night shift and some of them are really tired then they sleep so if you want to engage in a lot of calls"*
Participants E	"*I believe if for some reason sometimes you go to a place and some people don't wanna work with you, some they even say to your face that they don't want students" "I think the only that can work is the mentorship program…I would make is to have like designated mentors at different sites"*
Participant P	"*For us I think it was difficult in first year for a lot of students that have no medical background because they don't know how to do things. And then it differs from place to place, some doctors don't want you to do anything. So then you stand around the whole shift and nothing for twelve hours of your life which will be completely wasted. Then you get other doctors that are amazing, they tech you and they wanna give the opportunity but then in first year you get those doctors and you can't do anything. So then you feel stupid or inadequate"*
Participant K	*"There are those that tell you straight to your face that they don't want to work with students or you go to a shift and you get shifted to this ambulance and then the person in charge tells you he doesn't wanna work with student"* "*So you get to work with a sister but the sister doesn't really want to work the paramedic students. You get to work with this doctor but there is just too much work to go over and there is really no learning occurring at times."*
Participant L	"*We are not assigned to a specific doctor especially us paramedic. We don't have that chance. As a result if I am working and there are student doctors that are working, the priority is the student doctor. It's so surprising because even if you are working in hospital and the nursing students are there you will still be the last one even though it's a first-year student nurse and you are doing your third year or fourth but you are always the last option".*
Participant S	*"Different staff at hospital; like one hospital they'll be very friendly towards students. Coz they've had good experience with students whereas some hospitals won't be as friendly because of past experiences or staff like that"*

They revealed that there were mentors who did not enlist to do more work when working with students and that they did not render themselves available to tend to patients in emergencies.

Table 4. 5: Student participants' responses about the attitudes of clinical mentors towards teaching

Participant Pseudonym	Responses about attitudes of clinical mentors towards teaching in CP
Participant D	*"And some people they don't wanna teach you they don't enlist to be there themselves, so they don't go for calls."*
Participant L	"*I have been working with different paramedics but badly for me most of the paramedics they know me so they will tell me "I won't teach you anything new just treat the patient." So to me it's still working my hours but it's much better because there is a patient that intubated and ventilated. The Paramedic will just say "I will just drive and if you need something you will just tell me*".
Participant U	*"What happens is that there are some paramedics who go to lengths to get us the necessary exposure. They go to the dispatch centre and inform the dispatchers that they have students and that they would like to be dispatched first if there are calls. There are others who don't care, they will ignore the calls, they will even take their time when they are going to calls just so they can arrive to an incident late and have other services transport."*

What this participant implies is that after every call, clinical mentors in the pre-hospital environment need to inform the dispatcher of their availability to render their services in other emergencies. The participant indicated that some mentors did not inform the dispatchers that they were available and as a result they did not get dispatched to other emergencies. This made the participants perceive the mentors as non-willing clinical mentors in the CP.

The above narratives shows that students have expectation they believe should be met by the clinical mentors. It is not clear whether the students are made aware of their outcomes or objectives of the clinical placements. The data did not show evidence of students taking initiatives to elicit the clinical mentors to seek cases and additional work. This showed that some students perceived clinical practice to be mentor centred whereas commitment is required from all parties involved. Students disclosed that some clinical mentors were explicit or inferred that they do not want to work with students. The inference was made by students following their interactions

with the mentors. The mentors were said to not enlisting to attend calls or not interacting students at all. Some students revealed that they were verbally informed by the clinical mentors that they are not willing to work with students. Below in Table 4.12 is what the participants had to say about their experiences:

Table 4. 6: Student participants' responses about clinical mentors' willingness to teach

Participant Pseudonym	**Responses about clinical mentors, willingness to teach**
Participants E	*"I believe if for some reason sometimes you go to a place and some people don't wanna work with you, some they even say to your face that they don't want students"*
Participant K	*"There are those that tell you straight to your face that they don't want to work with students or you go to a shift and you get shifted to this ambulance and then the person in charge tells you he doesn't wanna work with student"*

In this case the students may not be encouraged to participate in activities taking place on shift as she/he is made to feel not welcome. Encounters such as these may have adverse effects on CP. The affected students are likely to not participate in any patient care or discussions that may take place (as revealed by participant P):

Table 4. 7: Response on how perceived negative encounters may affect the students' CP

Participant Pseudonym	**Responses on how perceived negative encounters may affect the students' CP**
Participant P	*"And then it differs from place to place, some doctors don't want you to do anything. So then you stand around the whole shift and nothing for twelve hours of your life which will be completely wasted.*

The most likely response might be to pick a corner and perhaps to remain there (Evans; 1997) for 12 hours or possibly leave the department early. This may lower students' self-esteem and result in students not having the will and confidence to participate in activities taking place on that clinical rotation (Lenman, 2014). They may not be confident enough because they may believe the clinical mentor is waiting to see them fail. Any opportunity to learn presented to the student by the clinical mentors may be perceived as a trap thus compromising their learning opportunities.

Furthermore, clinical mentors who are said to not want to work with students may have also showed little interest in teaching by possibly not enlisting to go on addition calls outside their work domain; they may have not interacted with the students during a case or even in between cases which may further hamper learning. Students may most likely feel that such clinical attachments were a waste of their time.

From the differences in the responses above it is important for everyone to note that not every clinical mentor is a teacher in practice. They may be obligated to work with students due to service-level agreements between the university and the company or service they work for. The dissatisfaction regarding their obligation to participate in CP may thus be projected onto the students which may in turn negatively affect the students' perception on CP, clinical mentors as well as the outcome of CP.

The practice of not volunteering to do more calls and not informing dispatch that they were available may have minimised the number of emergencies attended. The students may have ended up doing fewer or no calls at all, potentially leaving the students perceiving that attachment as "wasted". It needs to be noted that not enlisting to do more calls when with students may not necessarily mean that the clinical mentor is not willing to work with students. It may mean that the clinical mentor would rather utilise the time to catch up on some reading on the ever-evolving protocol and guidelines or possibly catch up on some paperwork.

The students' responses revealed that they there is an expectation that they were supposed to have clinical cases and "chase calls". Clinical mentors who do not "chase calls" are perceived to be not willing to teach and tend to leave a negative impression on students.

Participant L indicated that his/her was not adequately and effectively supervised in CP because she/he had a previous qualification. She/he said clinical mentors let her do everything on his/her own because of that. The way this participant was treated by the clinical mentors may have served as confirmation that there was no need for him/her to participate in CP and that there was no new learning that they could offer him/her because he/she was somewhat qualified. This may have made him/her

resentful of the course and CP all-together with the resulting non-participative, complicit approach.

Participants D and L further described scenarios she/he perceived to not have learnt anything from CP attachments. He/she said that some clinical mentors expect them to have clinical knowledge in place do not teach anything new, and that they sometimes ignore calls which results in missed opportunities for clinical learning. This is supported by the statements below in Table 4.5.

Table 4. 8: Student participants' responses about their perceived negative attitude of clinical mentors

Participant Pseudonym	Responses about their perceived negative attitude of clinical mentors
Participant L	"*First year I didn't get anything that interesting because we were doing just vital signs, BP and helping now and then because you were treated as first years although you are a qualified paramedic"*
Participant D	*"Some people (clinical mentors) they don't wanna teach you they don't enlist to be there themselves, so they don't go for calls. They don't expose you to a lot of stuff and that will also like reflect on your performance in class as well so I'm not really good at prac and I don't get that exposure on the road since my first year"*

Participant L's response reveals an important point, namely that within the first-year group of students there are "qualified Paramedics". This refers to that fact that this student (and perhaps some others) came onto the BEMC programme having already done a CCA 9-month short course. This course allowed him/her to register as a paramedic with the HPCSA although he/she had not undergone the three years of both theoretical and practical learning that the previous National Diploma in EMS offered. CCA entrants to the BEMC were given credit for some subjects but had to enrol for the whole four-year BEMC. This CCA had worked as a paramedic in the industry before coming on the BEMC programme. The response of this participant further reveals that the participant may have not perceived CP to be valuable in the earlier years and the response and attitudes she/he received from the clinical mentors may have resulted with the student not enjoying CP and possibly resented enrolling for the course.

According to the participant she/he perceived CP as indifferent in that she/he did not learn anything new during the earlier years, but she/he had to participate in CP in order to fulfil the requirements of the course. Participation in CP as a qualified paramedic especially in the earlier years of study may demoralise the students if they perceive CP to be of no benefit to them. Once a student perceives the practice as not important, they might start resenting the course.

The University is required to have opportunities for recognition of prior learning and award exemption where applicable as in the case of participant L. Students are required to apply for exemptions, they are not automatically awarded. The student participant has not indicated if there were opportunities offered to her by the department to have him/her exempted from CP since she/he was a qualified paramedic. She/he also did not comment on whether he/she attempted an application for recognition of prior learning specifically related to CP as she/he was in fact a practicing paramedic before enrolment into the course.

On the other hand, participant D revealed that she had not learnt anything through CP. She/he indicated that the reason for that was because the clinical mentors she/he had been assigned to had not afforded her opportunities to expose her/him to the field and patient. She also indicated that EMC practical was not her strong subject and that she/he was hoping that participation in CP would help address her/his shortcomings when it came to practical assessments. This student was in fourth-year and he/she admitted to not being good at practical performance and indicated that she/he was not getting the experience she/he perceives should be obtained through CP. if this was not addressed there is a possibility that student may have graduated to practice with deficiencies. It begs the questions whether the EMS department had the means to identify students such as participant D in order to attempt to retain them till such time they may receive the necessary clinical learning required.

The department does not condone any students whose practical portfolios are insufficient. Delays from this may result. Contrary to what participant D revealed regarding the clinical mentors not enlisting students to do more calls and respond to many clinical cases, participant Q shared a different opinion on the opportunities to

be exposed to clinical cases. Participant Q revealed that the clinical mentors were not in charge of the types and the number of cases students may be exposed to, as seen below in Table 4.6:

Table 4. 9: Responses about the amount of CP exposure

Participant Pseudonym	Responses about the amount of CP exposure
Participant Q	*"You cannot control our exposure some of the students are getting really interesting calls and a lot of experience and some of the students are not getting any calls at all"*

He/she seemed to accept that the clinical mentors were not responsible for the amount and type of exposure and that the types of cases and incidents encountered might be by chance. Participants A and L also made an indication that there were CP attachments that were not busy, that had low caseloads. They also described how they utilised the "free" time and created learning opportunities through discussions with clinical mentors.

Table 4. 10: Responses about how students use CP attachments to their benefit

Participant Pseudonym	Responses about how students use CP attachments to they're benefit
Participant A	*"…you can learn more through discussions that we have, and the debriefing and reflections afterwards are always good"*
Participant L	*"even in theatres, there is certain theatres whereby if it is quite the doctor (clinical mentor) can sit with you and you can ask questions"*

The responses of participants A, L and Q show that they accept that CP attachments are not guaranteed to be busy and that they will be exposed to a clinical case with every attachment. The comments also revealed that they the students might have not only perceived CP attachments as opportunities dedicated solely to hands on learning but rather, they also appreciated that they may draw on the knowledge of clinical mentors through discussions on cases, work covered in class or possibly case studies. The attitude demonstrated by these students is exemplary and showed that the students might have had an understanding of their field in that they

appreciated that not all the days of their career will be surrounded by cases but that there will be quiet days.
Being an emergency medical practitioner is more than just taking calls and responding to medical emergencies. Students needed to understand that quiet nights meant that people were safe and that no one was injured and that is very meaningful to a qualified emergency care practitioner. Students needed to come up with strategies to keep themselves busy on such shifts like reading their books, working on assignments or even engaging in academic discussions with clinical mentors on topics covered in class and not just perceiving quiet shifts as a waste of time.

The success of a CP model is reliant on the clinical knowledge of the clinical mentors on the scope of practice relevant to each year level. It is imperative that clinical mentors familiarise themselves with the scope of practice relevant to the years otherwise students may be put in the position where they are clinically tested on patients or possibly end up being expected to perform procedures on patients that are above the scope of the year level or possibly that of a qualified practitioner. Such conduct may lower the students' confidence and hamper their progress of learning; furthermore, this practice may undermine patient safety.

4.2.1.2. Availability of Resources

Participants B, D, G, H, N, K, J, P, Q and T further commented on factors they perceive to negatively affect learning CP whereas participants D, E, M and N commented on strategies that may enhance their clinical learning experience. The participants' cited shortages in human resources shortages in equipment, as well as shortages in qualified practitioners as factors that negatively affect clinical practice.

The participants said that in some clinical learning areas there were shortages of clinical mentors which resulted in them working with clinical mentors who were qualified in short courses (as discussed in Chapter Two). This may not have been a problem in the first and second years of study as the scope of practice of the earlier years had room for working with the clinical mentors from the short course offerings. There are different qualifications under the emergency medical care training. The

different qualifications differ in types of study, duration of study as well as the scope of practice after completion of practice. Paramedics as well as emergency care practitioners are called advanced life support practitioners.

The BEMC is a relatively young course and thus the practitioners who possess this qualification were few. BEMC students encountered situations where the mentoring clinician was an ALS practitioner but not a BEMC qualified practitioner. The challenge presented in third- and fourth-year level of study because the students' scope of practice may be higher than that of the mentors. This meant the student could not perform procedures in their scope of practice if the procedures were above the mentors' scope of practice. The risk would be that the students would end up being unable to obtain the skills required to meet the minimum requirements for successful completion of CP for the year level.

The shortage of mentors (professional staff) also exposed students to being treated like the work-force, said participant E. Where he/she has indicated that his/her perception was that the only time some clinical mentors engage with the students and show them their enthusiasm was when they were short-staffed and looking to have students to form part of their team instead of treating them like students. This practice might, in some instances, have helped improve the students' confidence as they were afforded an opportunity to function independently. However, having students treat patients unsupervised is dangerous and unethical. Should a student (unsuccessfully) perform a procedure the clinical mentor may not be readily available to manage the situation and may result iatrogenic injury. It is important to note that all BEMC students are registered with the HPCSA as student practitioners and are thus precluded from practicing independently. They must always practice under the supervision of a qualified practitioner. Any care rendered by students unsupervised is thus questionable.

In light of the new qualifications added under the emergency care training offerings, the HPCSA introduced the CP guidelines (CPGs). The CPGs detail evidence towards emergency medical care. It also details the different practitioner capabilities related to their qualification (HPCSA, 2018). Some of these evidence-based recommendations include use of procedures new to the pre-hospital environment,

such as use of diagnostic tools and new drugs. All this new evidence-based practice recommendation in the CPGs is said to be implemented in the BEMC curriculum.

Services were therefore required to train their staff on the new CPGs and purchase the equipment and drugs in order to comply with the HPCSA requirements (HPCSA, 2018). Many services have not obtained such equipment and the practitioners may have not been trained to use such drugs which may, prevent the students from practicing the procedures.

According to the student participants, CP attachments were coordinated in such a way that students are scheduled to go to different clinical learning areas on a rotational basis. According to the student participants and one lecturer-participant, it was designed this way to ensure students are afforded equal opportunities to access clinical learning areas as the different areas differ in terms of the type of patients they encounter, the specialities and capabilities of the clinical areas and the expertise of the clinical mentors. The diagram below serves as example of how the CP rotations are designed:

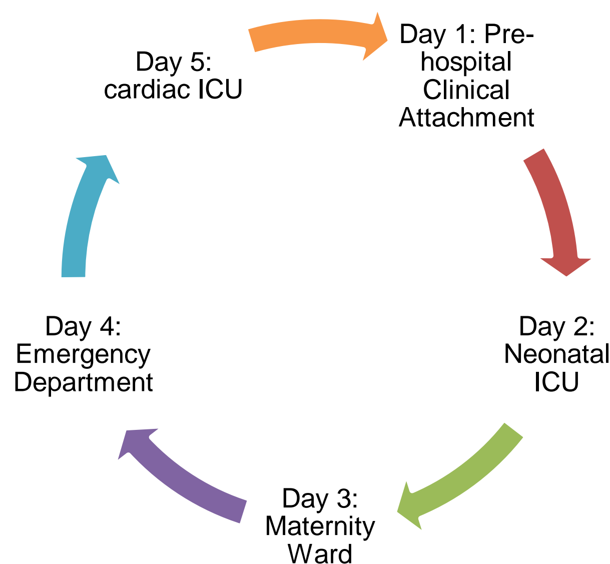

Figure 2: Typical fourth-year BEMC student's rotation in CP (as deduced from student interviews and a sample clinical roster)

Students were exposed to new clinical environments and mentors everyday they participate in CP. This means that the students had to spend their clinical attachment

proving themselves competent in managing patients and performing procedures to the clinical mentors only to meet a new mentor on the next day and start again. They were, in a manner of speaking, on their "first day" every time they are on shift. The comments below show that students believed that the rotations have a perceived negative effect on clinical learning in that they encounter different learning environments, clinical mentor attitudes and cultural differences.

Table 4. 11: Student participants' responses about clinical rotations in CP

Participant Pseudonym	**Responses about CP rotations**
Participant D	*"They don't expose you to a lot of stuff and that will also like reflect on your performance in class as well so I'm not really good at prac and I don't get that exposure on the road since my first year. So I think it also plays a role in how I perform in class cause I can't get that experience or exposure by myself."*
Participant E	*"The only time you feel like sometimes you are needed is whereby they are short staffed, if they are short staffed and you are there even if somebody does not want to work with you for the fact that there is a work overload them now that they need you that's when they only work with you properly. But I wouldn't say the experience has been that bad, there are some places where you go there and you work fine everybody is ok and there are places that you go there and people don't wanna work with you"*
Participant G	*"Trying to pick up everybody's different little habits and doing things the way that they want them"* *"You get like different paramedics or different practitioners who do things different ways. So adjusting to their way of doing things all the time is quite difficult the moment that they see you haven't done it the way they would have wanted to have it done. I think it breaks your confidence. It pushes your confidence down a little bit but if you're working with the same person"*
Participant K	*"…today you work with a different team and tomorrow it's a different team. So every time you work with a different team there like "I have never seen you do anything so you won't touch." The next time "uhm I have never seen you do anything you won't touch." So basically you end up observing mostly instead of participating in the procedures there."*

They believed this method does not facilitate progressive learning but rather they are subjected to having to prove themselves competent to manage patients or perform procedures every time they work with a different clinical mentor. The students are

taught specific system patient management with relevant treatment options and required procedures in a simulated environment, then they are sent on CP to work under the supervision of clinical mentors who may have developed their own style of patient approach and treatment or technique for a specific procedure. Rotating between different services and departments exposed them to different people who may suggest two different methods for doing the same procedure. From the discussions with the students it was clear the students would like to be attached to a specific CP platform for a specific period. Below is an example of a preferred model of CP rotation, emanating from student perceptions.

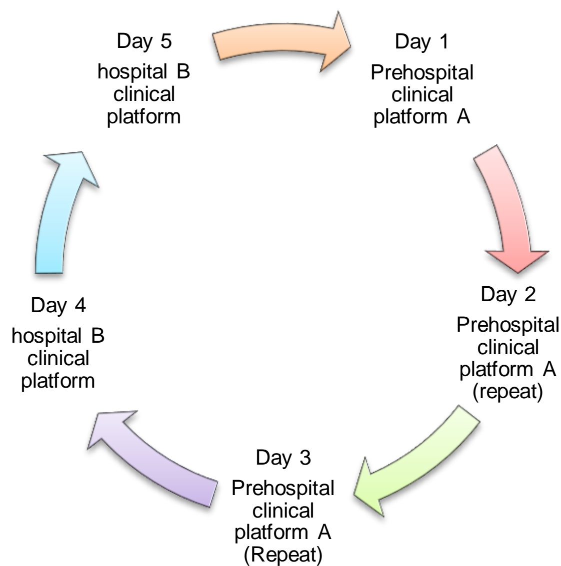

Figure 3: Example of a preferred model of BEMC student's (CP) rotation (adapted from student perceptions)

Figure 2 and 3 show different models of CP rotations. Figure 2 shows students attending a different CP rotation daily while figure 3 shows student being scheduled to attend the same CP attachment for a number of days at a time. The students indicated that they perceive the model in figure 3 as favourable as it afforded them an opportunity to spend time with the same clinical mentors and get to know their style of practice and possibly adopt it. Additionally this model may have possibly afforded opportunities to perform procedures and treat patients under the supervision of the clinical mentor more confidently.

This preferred model is also perceived to enable clinical mentors develop the confidence and trust they needed to believe the students are competent in treating patients and performing procedures themselves, limiting the vicious risk associated

with mentorship. Participants D, E, G, H and K indicated in the comments below in Table 4.9 that the frequent rotations take away the opportunity for them to treat real-life patients.

Table 4. 12: Responses on how clinical rotations impact learning in CP

Participant Pseudonym	**Responses about how clinical rotations impact learning in CP**
Participant D	*"Everyone is expecting something from you that they do in a certain way and you will never do anything right with everyone. So learning a bit there and learning a bit here but there's nothing concise."*
Participant E	*"The only time you feel like sometimes you are needed is whereby they are short staffed, if they are short staffed and you are there even if somebody does not want to work with you for the fact that there is a work overload they now that they need you that's when they only work with you properly. But I wouldn't say the experience has been that bad, there are some places where you go there and you work fine everybody is ok and there are places that you go there and people don't wanna work with you"*
Participant G	*"You get to learn from people who have been working on the road for many years and who have a lot more experience than you do and yeah I think that's about it. Trying to pick up everybody's different little habits and doing things the way that they want them"* *"You get like different paramedics or different practitioners who do things different ways. So adjusting to their way of doing things all the time is quite difficult* *The moment that they see you haven't done it the way they would have wanted to have it done. I think it breaks your confidence. It pushes your confidence down a little bit but if you're working with the same person"*
Participant H	*"It's a nice thing that we are working around in bases and so forth but if you work like for examples every shift you are working with a different ECP they don't get to learn you and you don't get to learn them"*
Participant K	*"You go there you go there **hey[(laughs]** you go there and then you are just lost, you are you find yourself doing this, later on you are doing that. You are just lost, you are just lost most of the time **…** I felt lost. Because as much as I end up doing things that are not within my scope, but I can't refuse because if I refuse they'll be like "you are cheeky and whatnot, you not participating" so you end up just doing for the sake of doing but at the end of the day you haven't learnt anything"*

The participants believed that they were not afforded adequate opportunities to practice because the clinical mentors may not be confident enough to allow them to

work independently. This possibly means that clinical mentors might also need to be afforded enough time to spend with the students and observe them to determine if the students are in fact competent to perform procedures and treat patients. Participant E further indicated that in some cases they were only afforded an opportunity to work independently if the clinical mentors were short-staffed or if the number of patients overwhelmed available practitioners. The students appear to welcome the situation as it helps them practice their skills. However, treating the patients unsupervised may pose dangers to the patients if the students become confronted with injuries or illness the students are unable to manage unless the clinical mentor is readily available to give advice and assist should such a situation come up.

Another factor that was perceived to negatively affect CP was how clinical mentors prioritised students. One BEMC student revealed that clinical mentors in the in-hospital environments prioritised students from other disciplines (like nursing and medicine students) over them. Most courses within the health sciences domain participate in WIL in the form of CP (CHE: 2011a). The CP platforms like the ICU ward, emergency department were sometimes the same for all course offerings. This means the students shared the space, the mentors and the cases. The lack of infrastructure as well as the high training demands of the may have resulted in an imbalance between the training needs and the availability of resources needed to meet the training needs. The problem may be worsened by having the different groups of students in the same department at the same time. This not only led to overcrowding in the departments; but may have also contributed towards the clinical mentors prioritising certain student groupings over BEMC students. For example, if the clinical mentor was a doctor and among the group of students in the department were student doctors, it is almost certain he/she would choose to mentor student doctors for the simple reason that they may have understood that course better, not necessarily because they dislike working with BEMC students.

Table 4. 13: Student participants' responses about shortage of infrastructure in CP

Participant Pseudonym	**Responses about impact of shortage of infrastructure in clinical learning**
Participant L	"*We are not assigned to a specific doctor especially us paramedic. We don't*

	have that chance. As a result if I am working and there are student doctors that are working, the priority is the student doctor. It's so surprising because even if you are working in hospital and the nursing students are there you will still be the last one even though it's a first-year student nurse and you are doing your third year or fourth but you are always the last option".
Participant J	*"We do not have enough vehicles to train the students. That would help the students a lot if we had enough vehicles and enough people to take the students to real case scenarios not only for us to practice on mannequins. The students must experience the challenges we are getting on real case scenarios"* *"We need vehicles in the university so that when the student goes out there he can be confident now you go there you are not confident. You only have theory and that practical of the mannequin which is not enough. We need while still here and without going out we need real life experience. Now we are learning different, they have a different way of doing things and where come back we are not sure which is which. Which is right."*
Participant K	*"I think is because there is not enough ECP on the road I think that is the first reason. So, there is a lot of students. Another reason is that even if you work with an ECT, I mean ECP practitioner you find out it is rare to get those skills. You find that if you are lucky you like RSI and intubation but skills like surgical cric and umbilical vein cannulation and IO skills for level 4. Secondly most places there is a lack of equipment to do those skills that's another problem."*

The lack of equipment was another weakness of clinical practice that was identified by the students. BEMC graduates are register as independent practitioners. It is thus important to note that the competence required to be independent is significantly dependent on the experience gained through their clinical practice attachments. Shortages in equipment required to perform procedures as indicated above compromises the students' experience, competence and readiness to practice independently.

Participants A, C, D, E, G, K, N, O, P, Q and S commented on possible strategies that may enhance their learning experience of CP as far as the clinical mentors are concerned as shown in Table 4.14.

Table 4. 14: Student participants' response about strategies that may improve CP

Pseudonym Participant	Responses about the strategies that may help improve CP
Participant A	*"So we have to brief them (Clinical mentors) on all of our signed off skills that we are we have got so if there was sort of like a program in place where they told them so we have fourth year students coming so this is their capabilities; that is what skill they're looking for then basically it would run off smoother than having to start again. "* *"Like I said and structured where they know our competencies and what we can do. The skills we are looking for and yeah and the lecturers I think with the new system that the lecturers have put in place where they are running the response vehicle that is much better"*
Participant D	*"Like I said I would go around bases ask people are you interested in being a mentor and I would place students with mentors not just with anyone on the road actually people who want to help them grow, who want to teach them stuff, whose willing to go the extra mile with them"*
Participant E	*"I don't have like a same place that I work with so I can understand their organisational culture and behaviour of that environment so one minute you are all over the place because all you are concerned about is reaching the target of the shift that have to work. So end up like working all over which is I feel like it's not right also, also recommend I don't know recommend professionalism no matter how many times we talk about this it is totally overlooked because I wouldn't say that everybody is being unprofessional but in most cases there is lack of professionalism in a lot of other cases there is a lack of professionalism and a lot of other cases they take non-work related stuff and they bring it to work"*
Participant G	*"In first year, they moved us around from hospital to hospital all the time so you never worked on the same place or the same base. Because of that you never really built-up trust with the crew and the people that work there. In third year they started building a booking us at the same places and we found that we kind of became part of the team there and there was a lot more trust, you got to do a lot more skills; which we didn't get in first and second year."* *"also booking us at the same page so that you can build a relationship with the crew and learn the procedures of that base and how they want things done Another thing is that the block shifts I feel like they need to do formal University structured classes for quite some time and then we break off from the class and then we go to the shifts for*

	some time and you come back to the class and I think that that could be helpful"
Participant K	*"I think there has to be integration between EMS and the rest of the, how do you put it? Integration say like I work at trauma **neh** there should be some sort of understanding that even when you are an EMS student and they're able to do that and they are able to do that so then so then how do we accommodate them"* *"I would do workshops and stuff like that "*
Participant N	*"at the same time like it would be nice if we were kinda assigned to a particular ECP or whatever so that you work with that one person continuously and build up a working relationship because obviously every time you meet a new crew you have gain a sense of trust with them so that they can allow you to do what need to do and trust that you are capable of doing that yeah that would be nice "*
Participant P	*"I will go to all the facilities that we have an agreement with and explain to them that we have first years, second years, third years and fourth years. The first years are able to do this; the second years are able to do that. And these are our students, this is what they are supposed to look like and if they don't look like this they need to be reported. If they act in an unprofessional manner, they need to be reported. I am saying this from having worked with students and I am embarrassed I study at CPUT when I see those students. Coz it's shocking, I would not let them work in my ambulance. So I think people in charge need to understand who we are coz I think they just.... on paramedic students. What does that even mean?"*
Participant S	*"Get system in place where lecturers must have regular check-ups with the students because everything is so focused on work you must excel in your work but then often the mental health side of it is neglected and it needs some attention. That's what I feel like."*
Participant C	*"They have to build relationships with these people and find a way to roster everybody from first year to fourth year but like some of the things that happen in the roster unexpected like roster changes. I really cannot blame them on that because if a hospital tells them "we cannot take your students" or a certain place tells them we cannot take your students because of ABC or we have problems with the cars like if a hospital tells them "we cannot take your students" there is nothing they can do. Maybe they can't take students because they have problems with the cars there is nothing they can do about that. I would just try to implement the block system and see how it works.*

	I don't know if it is something the university can do about relationships because as you know the industry is shifting from short courses and there seems to be a gap between people doing the short courses and people doing the university accredited courses."
Participant O	*"I would have each student assigned like one ECP that they would work with and mentor them for the whole year. So you get to know this person how they can teach you everything they know. Some people will teach you this and some people will teach you something else. It's also difficult to work with someone else the whole time because you have to prove you have to prove yourself like all the time, you know make them trust you. So maybe if each student can have one ECP that they work with then have their schedule to see when they work and continue to work with the same person"*
Participant Q	*"I would try to vat the people that the students are working on the road so see who the students are working with see if we are comfortable with them working with those people. because a lot of them or there are people on the road who don't necessarily do things always in the right way or they have bad habits that they have learnt from experience that are now being carried across to the students, so maybe just try and sort off control what the students are exposed to other than that I think I am fine"*

The student and lecturer participants talked about allocating students to specific clinical mentors to encourage fostering of good working relationships between students and clinical mentors. It is understandable that students would make this suggestion. They indicated that they are frequently rotated between clinical learning areas and mentors. This presented a challenge in terms of gaining confidence. The rotations were perceived to cost them the trust of the practitioners' required to afford them the opportunity to treat patients and perform procedures under the supervision of the clinical mentor. Although the allocation may be perceived as a way of possibly improving the status of CP and improving the students' experience of CP, the feasibility of such a practice needed to be evaluated. This would require the university to partner with different organisations and establish a formal mentorship programme. Formal mentorship refers to "*organisationally initiated efforts to match mentors and protégés*" (Eby and Lockwood, 2005). Formal mentorships aim to develop talent, improve employee knowledge, skills retention as well as enhance diversity (Eddy, Tannenbaun, Alliger, D'Abate and Givens, 2001). The number of

clinical mentors and clinical learning platforms available must be comparable with the number of enrolled students prior to the implantation of this suggestion. The students also reported that university needed to establish a capability to identify mentors who are willing to work with students and teach through clinical mentoring in CP. Clinical practice has an element of formal mentorship in that the organisations and the university negotiate the placements. Formal mentorship programmes also have challenges which include mentor-protégé mismatches, lack of motivation from mentors and protégés if they are participating for wrong reasons (Eby and Lockwood, 2005). In a formal mentorship programme clinical mentors may be compelled indirectly through incentives or directly as part of work performance indicators, to work with students (protégés) within the organisation.

The benefits are that students will have a specified mentor to work with ; however some practitioners may perceive as binding forced relationship and not be motivated to do their best (Eddy *et al.*, 2001). Research shows that informal mentorships yield better outcomes. In the programmes mentors and protégés match themselves and establish the relationship themselves without a third party (Eddy *et al.*, 2001). This might work out best for the university if such mentors volunteer and commit to teaching in CP.

As it stands there does not seem to be a programme or structure in place to recruit clinical mentors. There was no data indicating that the prerequisites for clinical mentors to be enlisted nor is there an exclusion criteria used to exclude practitioners from being mentors. It seemed enlisting to be a clinical mentor was voluntary and there was no form of remuneration attached to doing it which may also have made people reluctant to volunteer.

4.2.2. Planning, Monitoring and the Cost Of Participating in CP

"Planning, monitoring and the cost of participating in CP" was another prevalent theme. Under this theme the participants discussed the structure of the CP, the scheduling and the implications (both financial and time).

Participants B, C, G, H, K, M, N and T described the overall planning and scheduling of CP and how it may have affected other course content. Below were their responses:

Table 4. 15: student participants' responses about planning, monitoring and the cost of participating in CP

Participant pseudonym	Responses about planning, monitoring and the cost of participating in CP
Participant D	*"So what would also be nice if they would like implement allowances for us to get to like nice places. Like I stay in Stellenbosch, so I obviously … it's really expensive to work like in Cape Town area. "*
Participant E	*"I'm not kinda satisfied or happy about them because you only work like Friday, Saturday and Sunday but not all the weekends."* *"I don't think it's working it would have been better if we have … proper structured blocks whereby we know like for the first 4 months we are doing theory in class then the next month or so we are divided … to go to hospital and those who go to the road can go to the road."*
Participant G	*"What was expected of us was not well defined really in first year. We had a list of skills, but it was a list for the whole year and most of us we didn't know what the skills were ….we had FIS-DAP at that time and we didn't know how important it was actually, and took a lot of our time and we got really frustrated with it."* *"It's a new system that they use to monitor our skills but it's an American system it doesn't always work for our context. There's a lot of skills that we do aren't on there, there's a lot of things that it asks for that we don't do."*
Participant H	*"So, on first year we were booked on shifts the lecturer he puts you on shift so he chooses which days you will work and if you can't go to a shift then you have to hand in a sick note but you have to go to the shift and …we've been working in different clinical areas. "* *"From the third and fourth year we could choose our own dates when we want to work which has actually been very nice to be able to pick the dates so that you can come have some kind of a personal life as well. "*
Participant K	*"There is really no balance between studying and shift times, so I feel it's a bit overwhelming."*
Participant L	*"I can't say there is a failure of the Varsity but they don't do much monitoring or they don't take the students maybe as a group and get feedback from the students as to what is it that your learnt on the road, do you get enough skills on the road"*

Participant M	*"We worked mostly weekends and holidays from first to third year its provincial services with the Metro ambulances and the hospitals most departments, theatres and the clinics and in fourth year we start private shifts it was that you start in third year but with us it started in fourth year. So it also broaden experience and connections opportunity, booking it's always been yeah."*
Participant N	*"It's pretty much mostly up to us where we work and when we work for the most part Unless they have to cancel something for whatever reason it's nice cause you get to choose if you enjoy working at a particular place with a particular crew person you can opt to work there more. Or if it's closer to you, so that's nice."* *"I would say like that we don't it's quite like scattered they only recently started now bringing in blocks which I think they are a really great idea which we work consistently in a short space of time you working all your shifts and you sort of kind of get into it if that makes sense whereas if you are working once a weekend. It's very difficult to get into that mind-set"*
Participant O	*"they (ECT) can't do a much skills and then I asked my lecturer if I can rather go home because we have other staff like a lot of other work that I would rather go do at home instead of working with an ECT. So then I also wasted a lot of petrol and time as well to get to this shift. So just clarity on if you are booked with an ECP you are actually working with one."* *"And FIS-DAP is also a problem because like now they tell us that we have write a reflection for each patient and it takes very long because it doesn't load "*
Participant P	*"From when we were in first year we worked with 1 service. At this moment the first-years' work only with another service which I don't think it's right".*
Participant Q	*"I feel like there's a lot of misunderstanding with the hospitals when it comes to what we are actually supposed to be doing. In the hospitals it's a bit awkward because nobody knows what you're supposed to do with us because we are not nurses or and we are not doctors so they are not quite sure as to where we are supposed to be fitting in"*
Participant S	*"FIS-DAP is an important thing that is stressed now and back in first and second year it wasn't something that was stressed."* *"I think we have like 20 road in fourth year that we are supposed to do. I feel like that's not enough …. So, we should have more road shifts. I know they're starting to implement blocks where you work certain blocks, this and that"*

Participant T	*"You are given a time table in time where you can roster yourself to a hospital of your choice which in that sense it makes it easier in terms of transport and in getting of where you went to work where you know people they work together with students "* *"Not all people have access to internet sometimes things are there on internet and you see it a week later. So, people that have more access they have a chance to review whatever is there and book shifts in time preventing other people opportunity to work."* *"say for instance system for instance epidemiologic certain hospitals are more busier than others compared to emergencies …for that reason most of the students book themselves there so to randomise it would mean that somehow, I would make sure that people get the taste action."*
Participant B	*"There is blocks where we work shifts, however there is always assignments and extra work that needs to be done so even if it's maybe just a week or two where we can work shifts and you only concern on shifts and logging your patients and the skills that you get."* *"a solution would be blocks where we focus on shift so that weekends and holidays we can be with your family or loved ones and also just to rest as it can be very tiring to work "*
Participant C	*"Now they give us a little bit of control because we are senior year. They allow us to plan around our exams and stuff like that which is better."*
Participant J	*"FIS-DAP is another negative because whatever we do we need to upload on FIS-DAP and there is not enough to do that as a result if your FIS-DAP is not up to date then you are not gonna pass this course. That why I said FIS-DAP falls in negative. We haven't been taught how to use that program (FIS-DAP) so you have to go learn it by yourself and then that takes time."*

4.2.2.1. The Structure and scheduling of CP

They indicated that the inception of CP in their first year of study was ineffective and the outcomes were not clearly defined; and they were sort of "thrown in the deep-end". The students further indicated that they had no control of when and where they were placed which further complicated the situation. The students also commented on how CP takes up a lot of their time. They revealed that CP areas are scattered

across the city and surrounding regions and that this resulted in them having to include longer travel times in addition to the twelve-hour shift they still needed to do. The distance to clinical learning areas was not the only reason for the long travel times said one participant, but also the imperfect public transport systems. With unpredictable taxi or bus strike and inconsistent train schedules, difficulties associated with accessing the clinical learning areas by public transport played a role in long travel times. The combination of the abovementioned factors left the students with minimal time to study or socialise during clinical learning attachments.

Fourth year students were "veterans" of the BEMC because they were well oriented on the course and understand the objectives of the course. Being senior students earned them opportunities to pick and choose when and where they worked at their own convenience. Citing that CP is time consuming and affected their study time negatively implied that to a certain point; students may have had difficulties with managing their time.

Effective time management may include studying towards an exam from the day the subject matter is covered not necessarily two or three days before an assessment, this would have helped alleviate pressure of studying towards an exam. One needs to note that exams should be communicated well in advance through learner guides and other platforms such as notifications on notice boards as well as the online platforms. In cases where the communication on exam dates were delayed, students needed not be pressured to study preceding the exam if they adopted effective time management strategies as stipulated above.

4.2.2.2. Cost of Participating in Clinical Practice

Participant D and M further commented on the expenses that accompany participation in CP. The table below describes what they had to say.

Table 4. 16: Student participants' responses about the expenses that accompany participation in CP

Participant Pseudonym	Responses about the expenses that accompany participation in CP
Participant D	*"I stay in Town A and have to travel to Town B for CP and it's expensive."*

Participant M	*"Working on weekends and holidays takes away the time for studying for tests and assignments, and time for filling in patient paperwork. We have targets on our holidays as well as other targets which need time for, by the time we finish we don't sleep which in any case you work further which they say it's normal."*

Participant D revealed that participation in CP was expensive, specifically the cost associated with traveling to the clinical learning areas. In paragraph 4.2.1.1 student participants indicated that they travelled long distances to access the clinical learning areas, regardless of mode transport (own or public), it was expected that there were some financial implications attached to that. Parents and bursaries may not know that there were additional transport costs that accompany participation in CP. This needed to be clearly communicated with the bursaries, parents or guardians. Participant M commented that CP is depriving him of his sleep. He/she indicated that CP is scheduled to take place over weekends, public holidays as well as university holidays. He/she indicated that CP takes away the time they needed to study and do assignments. CP attachments are twelve hours long, this possibly meant that during CP attachments students might not have had any spare time to do other course related tasks as it takes up most of their time and they arrived home late. However, with other tasks pending the students might have needed to dedicate time to completing the tasks given in order to meet deadlines.

In addition to performing tasks such as assignments, case reports and studying towards exams; students needed to complete patient related documentation. This workload could have possibly led students to experience sleep deprivation which might result in significant memory loss, challenges problem solving and critical thinking (Schumacher & Sipes: 2015). Adequate sleep has been seen to improve overall performance of human beings. The benefits of sleeping adequately are stipulated by Schumacher and Sipes (2015). These benefits include committing new information to memory, maintaining normal body processes such as proper carbohydrate storage and maintaining proper hormone levels, reduced tendency for day time sleepiness. This thus reduces the risk of human errors such as medical mistakes and traffic accidents, reduction in irritability and patience (Schumacher & Sipes: 2015). Adequate sleep is also said to improve concentration and improves mood and reduces lethargy. This concurs with what participant M explained.

Table 4. 17: Student participant response on how lack of sleep affects students

Participant Pseudonym	Response on how lack sleep affects the students
Participant M	*"How it affects me I have noticed how I work on shift. I will show less enthusiasm and effort and I might catch myself not actually treating the patient properly."*

Considering the information CP sleep deprivation not only takes the time from performing other tasks but if not corrected might do both the students and patients as sleep deprivation predisposes affected individuals to lack of concentration which may result in serious accidents.

Participants S, O, L, G and J commented on how CP was monitored and the strategies that were utilized to enhance CP monitoring.

Table 4. 18: Student participants' responses on how CP is monitored

Participant pseudonym	Responses about how clinical practise is monitored
Participant L	*" I can't say it's a failure of the Varsity but they don't do much monitoring or they don't take students as a group and get feedback from students as to what is it that you learnt on the road… or do you get enough skills on the road*
Participant E	*"you will have a proper working relationship with the students because they are willing to be there not whereby every time you have to like fight hard or prove that you deserve to be there.* *evaluations that are part of the course sometimes you have an evaluation form the fact that the person didn't want to work with you in the beginning you are then very hesitant to give it to them to evaluate you because you are thinking "what are they gonna put" if they didn't want to work with me in the first place."*
Participant C	*"The only thing that is a challenge this year is getting feedback. In the form of written feedback. We are supposed to hand them an evaluation form that we are given. They supposed to write down how they felt, your professionalism, how you handled yourself. If you knew your theory to the expected standard but that is proving difficult"*
Participant S	*"FIS-DAP is an important thing that is stressed now and back in first and second year it wasn't something that was stressed."* *"I think we have like 20 road in fourth year that we are supposed to do. I feel like that's not enough …. So, we should have more road shifts. I know they're starting*

	to implement blocks where you work certain blocks, this and that"
Participant O	*"And FIS-DAP is also a problem because like now they tell us that we have write a reflection for each patient and it takes very long because it doesn't load "*
Participant J	*"FIS-DAP is another negative because whatever we do we need to upload on FIS-DAP and there is not enough to do that as a result if your FIS-DAP is not up to date then you are not gonna pass this course. That why I said FIS-DAP falls in negative. We haven't been taught how to use that program (FIS-DAP) so you have to go learn it by yourself and then that takes time."*
Participant G	*""It's a new system that they use to monitor our skills but it's an American system it doesn't always work for our context. There's a lot of skills that we do aren't on there, there's a lot of things that it asks for that we don't do."*

The students described the two methods through which the university monitored the programme; they cited a survey conducted by the clinical lecturer in the previous year and an online programme called the Field Internship Student Data Acquisition Project (FISDAP). The student participants and one of the lecturers indicated that the Department of Emergency Medical Sciences rolled out a survey in an attempt determine the status of CP and identify changes needed to improve the clinical platform offering. The students indicated that the suggestions they made were in the process of being implemented. One suggestion was the implementation of the block system where students are allocated two weeks to do clinical rotation without breaking for class. This was an example of students and the university department working together towards establishing an effective CP model.

The FISDAP is an online programme that is used by the Department of Emergency Medical Science to monitor CP (FISDAP: Online available on www.http://FISDAP.com). It was used for the administration of CP. This included the schedule of CP rotations, monitoring students' CP activities and record-keeping on CP, patient records including assessments, procedures performed on them as well as treatment administered. The students logged in to the programme and uploaded details of their clinical learning from the amount of CP attachments attended, number of patients seen by the students, details of the patients' condition and treatment and procedures performed on the patients by the students. This system enabled the university to evaluate how busy specific clinical learning areas were, the prevalence of injuries and whether students were compliant with CP outcomes.

The students viewed FISDAP as a negative factor in CP in that it is internet based, meaning that internet is required to access the programme. The university and its residences have free Wi-fi that students used to access the programme. Internet access may have been a problem for students living off campus as they may not have had readily available internet access to access the programme. This may have resulted in them having to do it on campus which may have also posed a challenge as the students needed to be in class when on campus. The students may have also resort to buying data bundles for internet access to minimise the risk of missing class which further increased the financial burden that came with participating in CP. The logging of all CP content on FISDAP was also said to be time consuming. Encountering patients in the emergency medical environment is not ideal.

The fast-paced nature of the EMS and the nature of the injuries does not always afford practitioners the luxury of being able to access all patient information (from an identity document or next of kin) due to many reasons like the patient being unconscious or in mass casualty scenes to name a few. According to students, the patient report forms are required to have the patients' full identification. All patient report forms are then put in an electronic format on FISDAP. Patient report forms that did not have personal information of the patient (are said to be incomplete), could not be logged onto FISDAP. This means that for FISDAP to accept a patient all relevant information must be filled out. The procedures and treatments on the unknown patients could not form part of the completed requirements of CP. The concerns of the students were genuine however, the programme was probably designed this way in order to mitigate the risk of having students logging ghost patients and claiming they treated them. Furthermore, completion of patient report forms either manually or electronically is part of the work experience both in clinical practice and in real life following graduation. Keeping records of patients fall within the scope of any qualified health care practitioner and the students need to view the compliance with FISDAP as a component of clinical practice that contributes towards their learning experience. That being said there needs to be opportunities to enable students to log genuinely unknown patients.

4.2.3. The Knowledge of Clinical Mentors on the BEMC Course

As previously mentioned above, there are courses in the medical field that include participation in WIL similar to [the BEMC] CP in their curriculum (CHE: 2011a). The course offerings utilise the same clinical learning areas and same mentors; however, the courses differ in content and scope of practice. Effective mentoring of BEMC students is reliant on the clinical mentors' knowledge of the course as well as knowledge of the scope of practice of the specific year levels. The knowledge of clinical mentors on the BEMC course) is another theme that emerged. Under this theme the 9 participants describe the interaction between clinical learning areas, the university and the students. They described how communication strategies affected how information reached clinical mentors and the expectation of CP revealing how they have to brief them.

The participants A, K, N, P and S described their encounters specifically with in-hospital clinical mentors. The students perceived the clinical mentors to have limited knowledge on the course content and scope of practice relevant to the BEMC. The students reported how during their interactions with the mentors had to inform the clinical mentors of the scope of practice in the BEMC and the capabilities of students in the different year levels.

Table 4. 19: Student participants' responses about how the students have to brief the clinical mentors on their scope of practice

Pseudonym Participant	Responses about how the students have to brief the clinical mentors on their scope of practice
Participant A	*"So we have to brief them [Clinical mentor] on all of our signed off skills that we are we have got so if there was sort of like a program in place where they told them so we have fourth year students coming so this is their capabilities; that is what skill they're looking for then basically it would run off smoother than having to start again."*
Participant K	*"I think it's the hospital overall especially I would say obstetric units they don't let you touch anything unless they themselves they feel that they want you to. "For example I was lucky that I worked with the same sort of like team every time I worked staff that I worked with previously so they said that ok* ***wena*** *we have seen you do this ok we can let you "*

Participant P	*"I don't think it's the particular service. I just think that it's private and government. I think there should be a balance between the two. Because the reasoning at the moment is that the first years have to work with so that they don't learn bad habits from government and that is highly offensive. I mean you get lazy people in government and you get lazy people in private."*
Participant S	*"When you go especially when I started in second year and third year going to hospital shifts. You don't know what's expected of you, neither do the nurses and the doctors. It's something that I found common through all hospitals. Even they ask us what are you supposed to do actually. "*

They indicated that most in-hospital clinical mentors were not familiar with the scope of practice of the BEMC students specifically relevant to the year levels and how they sometimes had to brief the clinical mentors on their capabilities prior to commencement with clinical learning. Communication between the university and the CP areas takes place at a managerial level possibly between the HODs and the CEOs and EMS directors. The possibility is that once agreements and arrangements were made, the information may have not be filtered down to the operational levels, the level where clinical mentors function, effectively accounting for the situation where clinical mentors are not well informed on the content and scope of practice of the BEMC as well as the capabilities of students in the respective year levels.

This situation may result in either the students not being afforded the opportunity to participate in activities in the emergency services as the mentors may have not been aware of the students' capability. Thus will compromising the learning process of the students or the students could potentially be asked to perform a procedure they have not yet learnt or that was beyond the scope of practice of the BEMC. Either scenario can prove harmful to the students' learning and potentially to the patients if the latter is the option chosen.

Participants A, C, D, G, N, P and S commented on possible strategies that may be employed to improve the relationship between the students, the university as well as the clinical learning areas.

Table 4. 20: Student participants' responses about possible strategies for improving the interaction between students and lecturers

Pseudonym Participant	**Responses about possible strategies for improving the interaction between students and lecturers**
Participant A	*"there should be some sort of understanding that even when you are an EMS student and they're able to do that and they are able to do that so then so then how do we accommodate them"*
Participant D	*"Like I said I would go around bases ask people are you interested in being a mentor and I would place students with mentors not just with anyone on the road actually people who want to help them grow, who want to teach them stuff, whose willing to go the extra mile with them"*
Participant K	*"I think there has to be integration between EMS and the rest of the, how do you put it? Integration say like I work at trauma* ***neh*** *there should be some sort of understanding that even when you are an EMS student and they're able to do that and they are able to do that so then so then how do we accommodate them"*
Participant N	*"I would say the fact that there are so many different options available to us for where we work because you get exposure to say government and private Yeah because they very different and we were only allowed to work government up until fourth year. I have learnt a lot that it's so very different in private. That's definitely a positive that they're giving us the opportunity "*
Participant S	*"Get system in place where lecturers must have regular check-ups with the students because everything is so focused on work you must excel in your work but then often the mental health side of it is neglected and it needs some attention. That's what I feel like."*
Participant C	*"I am sure they doing their best given the circumstances considering that they do not have control of the sites where they place us. They have to build relationships with these people and find a way to roster everybody from first year to fourth year but like some of the things that happen in the roster unexpected like roster changes. I really cannot blame them on that because if a hospital tells them "we cannot take your students" or a certain place tells them we cannot take your students because of ABC or we have problems with the cars like if a hospital tells them "we cannot take your students" there is nothing they can do. Maybe they can't take students because they have problems with the cars there is nothing they can do about that. I would just try to implement the block system and see how it works.* *I don't know if it is something the university can do about relationships because as you know the industry is shifting from short courses and there seems to be a gap between people doing the short courses and people doing the university accredited courses."*

The definitive option to possibly mitigate the abovementioned situation would be the placement of students with qualified BEMC practitioners. The programme has been running for a few years now, it is understandable that there are not enough practitioners to place students with. The student participants suggested having workshops that might help the clinical mentors be oriented about the course and students' capabilities specific to year levels. They also revealed that the university need to have strategies in place to monitor the CP environment. The strategies according to students should be employed ensure the clinical mentors were oriented to the course and evaluate their compliance with the teaching that takes place in class. The university would need to have a channel to ensure that challenges encountered by both the students and clinical mentors are addressed timeously.

Workshops are relatively a good idea, though they are time consuming. The clinical mentor would be required to attend them on their spare time (days they are not at work or otherwise committed). One would need a motive to spend their spare time at workshop. There would need to be an incentive for mentors to attend the workshop and ensure compliance. Monitoring of CP through frequent communication with students as well as possibly having the lecturers enlist to work at the clinical learning areas may also present an opportunity to learn about issues that need to be addressed in the CP domain. These suggestions if implemented would possibly solve problems encountered by BEMC. It is important however, to ensure that other students are not be compromised in the process. Other opportunities that may be explored may include schedule changes that allow separate student groupings to be placed separately.

4.2.4. Students' Perceptions on Available Support Structures Within the University

This theme was the least prevalent theme; the theme only emerged in three out twenty interviews. It emerged in the interviews as a direct response to one of the research sub-questions. Emergency medical care practitioners are first responders in scenes where patients are traumatically injured or critically ill. Students are exposed to the different types of scenes and patients both in hospital as well as in the out-of-hospital environment.

Such exposure has the potential to traumatise students. Participants H and S indicated that the university lacked infrastructure necessary to deal with students who have been exposed to horrific scenes and critically ill patients and death.

Table 4. 21: Student participants' responses about the perceived emotional support required by students from the EMS department and the University

Participant Pseudonym	Responses about the perceived emotional support required by students from the EMS department and the University
Participant H	*"The only thing that's been actually bothering me a lot is the fact that from the beginning of the first year we never had like debrief after shifts or anything. So for example I am gonna put myself as an example you see something like a suicide that really bothered you and it challenged you or something that changed your way of thinking and you need to speak to someone there's never been someone we can debrief with not counselling services per se I don't know if you understand what I mean, like being able to talk about what you experienced and it's something that's been bothering me like nobody's helping cope with stuff like that I've had a baby the other day that we had to resus and the baby didn't make it.*
Participant S	*"There is no system from my personal experience system in place for mental health issues especially in this department. I don't know what it's like anywhere else. Where if you do experience something, you are told to go to the counsellor they just sought of "ok this happened. Go to the counsellor. Sort it out." There is no follow up. "Are you OK, are you doing alright" it's just you are just left on your own. The sort of just refer you to a counsellor whereas the field we are in is a closed field everyone knows each other. "*

The participants said they were aware of the psychological support available at the university's health care centre but stated that was not what they believed they needed. They revealed a need for a formal debriefing session with the lecturers and their peers to talk about their experiences with somebody who may understand the situation and the environment not necessarily somebody who would seeks to treat the students' mental health. The request may be achievable where the Department of Emergency Medical Sciences officially created opportunities for debriefing sessions with students in a group discussion setting, however a qualified counsellor may still be required as these sessions can be unpredictable where a student can be significantly affected by an incident. If such a case is presented the counsellor would be able to observe the student and potentially seek to see the student individually.

Lecturers may not have the capability to diagnose students who are mentally affected by the exposure to horrific or emotional scenes. That being said the students need disclose their needs to the department and the university where applicable. They must also acknowledge the implications of implementation of the debrief sessions on the overall course as far as time is concerned.

Participant J described his/her need for academic support. He indicated that university processes and assessment are significantly different from those in high school.

Table 4. 22: Response about the perceived academic support required by students from the EMS department and the University

Participant Pseudonym	Responses about the perceived support required by students from the EMS department and the University
Participant J	*"I will refer to myself because I am still struggling now with assignments. I am from school. I studied my high school I never did assignment even research, so now when we do assignments we have to reference I would like if possible when the students do the first year need to be shown how to do these things because some of us we never did these things…"*

He/she described the need for the Department of Emergency Medical Sciences to implement academic orientation sessions where the assessments processes, the use of university internet is elaborated on and access to the online support of the university are thoroughly discussed. This way they would not have to learn through their mistakes but would have a reference point to where they can refer should they encounter challenges.

4.2.5. Students perception of discrimination in CP

Discrimination is defined as unjust or prejudicial treatment categories of people, especially on the grounds of race, age or sex (Cambridge online dictionary: Online, available on https:www.dictionary.cambridge.org). South Africa has eleven official languages however English remains the medium of instruction in the course. All role players need to be aware; the student complement is made up of people from all over the country as well as other countries [mostly in Southern Africa]. The course may be made up of different groups of people speaking different languages, with

different religious backgrounds, cultures and beliefs. Any allegations of discrimination need to be interrogated not only to protect the students but also to protect the reputation of the university and the services involved in CP. The participants indicated that they have been discriminated against because of their inability to speak a language. The students said that the clinical mentors would carry out a conversation in a language the students did not understand throughout the shift. The theme deserved attention given the history that South Africa has and its sensitivity towards any form of discrimination.

Below are accounts of encounters of discrimination described by the participants:

Table 4. 23: Student participants' possible strategies for improving the interaction between students and lecturers

Participant Pseudonym	Responses about the perceived discrimination against students by the clinical mentors
Participant D	*"For example they (Clinical mentors) place you with that those people and then they just speak their language and you must just sit there wait for a call for 12 hours long."*
Participant E	*"during first year and second year we used to be judged a lot because we are of the same colour with them and they assume you already know and when they speak to you in their in their language and you respond to them in English then they feel offended and they even speak on the side that how come you are dark like them but you don't speak their language and they take it in a bad way that you wanna look better than them and that is actually not the case"*
Participant T	*"some Hospital staff or doctors some there's barrier language if you are working in Paarl Theatre you are sort of obliged to or expected to speak Afrikaans which lowers a self-esteem a bit you know when you are speaking to someone in English and they respond in Afrikaans but sometimes if you are lucky enough you get doctors that understand that there's a language barrier and they will try to conform."*
Participant C	*"I arrived on shift and then this lady starts speaking to me in Xhosa and I asked her can you please speak to me in English because I cannot understand and then she swears at me for no reason and I am not even working with her she was just passing by"*

The students shared their views that it was possible that the clinical mentors chose to speak another language other than English for reasons other than to discriminate against the students: a phenomenon referred to in literature as microaggressions. Microaggressions are said to be acts of discrimination that are considered normal in a community. As indicated above in Chapter Two there are different practitioners in the emergency medical care domain where there are mentors who were trained in the short course offerings which did not require any level of foundational knowledge in terms of English and, therefore, are not proficient in English. Sometimes it may be because they chose not to speak English for reasons other than those specified above. Whatever the reason why the mentors spoke a language other than English, the practice excluded the affected students, resulting in students resenting working at that specific clinical area with that clinical mentor.

4.3. Data Analysis: Lecturer Participants

The lecturer participants were interviewed using a different guide as indicated above. Some of the themes that emerged were the same as those that emerged in student participants' interviews, but the context differed significantly. Table 4.24 indicates the lecturer participant themes that emerged.

Table 4. 24: Themes emerging from lecturer interviews

Theme L1	**How teaching and learning occurs in CP**
Sub-theme L1	Availability of infrastructure to support learning and teaching in CP
Theme L2	**Inter-institutional relations**
Theme L3	**Lecturer perceptions on learner support in CP**

Unlike within the data analysis above, where there were differences and contradictions in the themes of student participants, there was consensus amongst the lecturer participants. This section describes the findings of the lecturer participants.

4.3.1. Theme L1: How Teaching and Learning Occurs in CP

In this theme the lecturers describe how learning and teaching should take place in CP. Lecturers 1, 2, 3 and 4 described how the opportunities for learning and teaching are presented by CP and the importance CP in learning towards the profession. CP was meant to help students consolidate the knowledge obtained in class through theory lecturers and simulated practical training into real life practice. The lecturers indicated that CP was supposed to help students acclimatize to real life incidents and real-life patients. They further explained that CP was not focused predominantly on acquiring skills and performing procedures but also on interaction with patients, exposing them to different types of patients. There is large number of differences that the students would not otherwise be exposed to in a simulated environment. Patients come from different socio-economic backgrounds which are seen to influence their lifestyle, health as well as exposure to certain ailments. Socio-economic statuses influence the type access to healthcare; students need to be exposed to that.

Simulated environments cannot be used to gain that exposure. South Africa has eleven official languages which poses a communication challenges in clinical environments in addition to South African citizens there are foreign nationals living in South Africa but unable to speak a South African language further presenting another conversational barrier. CP presents students with all sorts of scenarios which they may not have encountered if they did not participate in CP, it offers real-time interactions with patients. Lecturer Two further reflected on his/her own experience in that he/she indicated that during CP as a student, his/her focus was predominantly on meeting the CP requirements.

Table 4. 25: Lecturer participant's response about how perceived insufficiencies in CP may affect future practices

Participant pseudonym	Responses about how perceived insufficiencies in CP may affect future practices
Lecturer 2	*"What I found the most difficult transitioning from actually being a student and then having qualified now you are the paramedic on the road. It wasn't so much the skills that you needed to do that when you get an unconscious patient that comes quiet automatically"* *"the part was taking charge of the scene when you as a young graduate may have to be the boss around or tell people who have been doing the job as BLS or ILS for 20 years in age they are much older but now you should be telling them now that there's new guidelines and correcting them and you are new. There's Prejudice against you so I found it very difficult in the beginning."*

He/she indicated that her objective was to see the prescribed of patients, performing the specific amount of prescribed procedures and not engaging with patients and the crew members. This demonstrates a technicist approach to learning where she/he is focused on accumulating skills and participating in CP only to maintain compliance (Navera, 2018). She/he revealed that she did not acquire in depth learning that accompanied CP during her period of study but rather after she obtained his/her qualification. She/he confessed that she/he could not effectively interact with patients which was necessary for effective management of patients. The other lecturer revealed that their perception on what CP was all about and the objectives and role of CP in emergency medical care training.

Table 4. 26: Lecturer participants' responses about perceived CP objectives

Participant pseudonym	Responses about perceived CP objectives
Lecturer 4	*"at the end of the day CP is where you take the theory and the clinical skills component you learnt in class and you go and apply it in a real-life situation, so that when they graduate they've had all those experience under supervision and that they don't get thrown into the deep end of the day. So, it's applying the theory that they learnt into practice. "*
Lecturer 3	*"I think the CP objectives start in the practical lab. On a level they are able to perform their skills comfortably on a mannequin from there ultimately take them on the road and you supervise them to practice on actual patients after that help them and teach in a clinical environment as well in hospital and on the road and*

	things like that."
Lecturer 2	*"The big that I saw and picked from the students, is that they don't really know how to talk to patients* *"Translating the knowledge that they have picked up. They study a lot, they study a lot of things but then they are sitting with a patient they really struggle to translate all of that. So I can see a student doing a perfect RSI for example upstairs and have a system and a checklist and everything but then when we pitch to a real patient then everything goes down the drain. They forget to do things and they forget to do certain steps that I have seen how they have done perfectly well upstairs"*

The above lecturers talked about how students needed to approach learning through CP. There was a consensus amongst lecturers that CP's objective was to put into practice what was learnt in class into real life situation regarding patient care.
This means that the students needed to apply theoretical knowledge and practical knowledge gained in class towards their patient management strategies. The lecturers indicated that they had realised that students were having difficulty making the transition. There may be a number of reasons why that was the case. As indicated in Chapter Two students are giving a set of goals/requirements relevant to CP that they need to meet in order to successfully complete CP in each year level.

One of the requirements was to obtain a certain number of skills; the possibility is that the students may be focused on reaching that goal instead of focusing on acquiring in-depth knowledge and being contextual in their approach. The students might not gain attributes that come with being in a WIL programme like gaining the ability to manage the scene and patient independently. An inability to make transition from classroom knowledge to patient care may also be attributed to the clinical mentors' limitations and their willingness to teach (or lack thereof) as discussed in earlier themes. This may have compromised the opportunities for students to learn in CP. This situation, if prevalent, may significantly have affected how the students were learning and may hamper development of well-trained clinical practitioners.

4.3.1.1. Sub-theme L1: Availability of resources

A successful and effective WIL programme is heavily reliant on the infrastructure to support it as discussed extensively in Chapter Two. Infrastructure in the context of CP means available clinical learning areas (hospital, clinics and emergency medical services departments), human resources (clinical mentors) and specialised equipment required to perform procedures. The lecturers described limitations of CP and how they negatively affected effective administration of CP.

Table 4. 27: Lecturer participants' responses about how perceived shortages in infrastructure affect CP

Participant Pseudonym	Response about how perceived shortages in infrastructure affect CP
Lecturer 1	*"just because the European got brilliant rating it may not be an applicable one for an African setting because we resource limited, and we have much different circumstances than that they may be facing"*
Lecturer 3	*""Another big thing is that there is such a big influx especially in the western cape, we have only got so many academic hospitals. They feed the medical students, the nursing students, the paramedic students and physio students. All of them our students have to compete with them"*
Lecture 2	*"Our weaknesses currently is the lack of resources. Not just here but out in industry. Lack of access to resources. I would like to see a really strong mentorship program, but I cannot access the practitioners because they are either not interested or it's not really their job to be a mentor to students at a university. "*

The lecturers indicated how the clinical learning areas were unable to meet the demands of CP. In the vicinity of the university there were several other universities offering the same or similar emergency medical care course as well as other courses within the health sciences domain. The courses and the universities CP (WIL) in their curriculum utilised the same clinical learning areas and the same clinical mentors as the BEMC. This may have led to an imbalance between the number of students at clinical learning areas at a given time and the available infrastructure.

Patients may also be viewed as an entity that contributed to the success of CP and work integrated learning in the health sciences domain. This means there might be an influx of students at a particular clinical environment may have limitation to students learning if the number of patients does not match the number of students in that area. This may create a need for competitiveness amongst the students from all domains of the health sciences. Healthy competition may serve as motivation to do better. It is also imperative to determine if the shortages in infrastructure and patients were not significant enough to negatively impact the overall clinical learning for all students regardless of the course, they were enrolled in.

The lectures revealed another limitation to be a lack of access to clinical mentors at the operational level. They indicated there was no incentive for clinical mentoring (financial or otherwise) for the clinical mentors and that clinical mentoring was voluntary. This may contribute to the inability for clinical mentors to access clinical mentors.

Lastly, there may be a general shortage of clinical mentors in the industry itself which may contribute to the shortage in clinical mentors. Lekhuleni *et al*., (2004) revealed that emigration of practitioners play a big role in shortage of clinical mentors. The emigration of experienced practitioners gives rise to a concept called brain drain. Brain drain refers to "*the international transfer of human capital resources and it applies mainly to the migration of highly educated individuals from developing to developed countries*" (Docquier, 2014: 2). Emigration of qualified may be financially and academically beneficial to healthcare professionals and the professional. In developing countries this causes fiscal losses reducing human capital and inducing occupational distortions (Docquier, 2014). Brain drain results in shortages in manpower, thus undermining a country's ability to adopt new technologies or address health crises. In the case of WIL, the country might not have the manpower it needs to conduct effective programmes (Docquier, Olivier & Marfouk, 2007). Despite the reasons for shortages in clinical mentors; an evaluation of deficiencies that tend to compromise CP must be made.

4.3.2. Theme L2: The Relationship Between the University and the Clinical Learning Areas

"The relationship between the University and the clinical learning areas" was another theme that emerged in the student participants' analysis. The students revealed that the current relationship between the role-players in CP negatively affected their clinical learning experience. The students perceived poor communication strategies between the university and the clinical learning areas. They also reported that they perceived in-hospital clinical mentors to prioritise their counterparts from other course offerings in the health sciences domain over them. This, according to students, limited their access in CP and thus limited their opportunities to learn, perform procedures and treat patients. The lecturers 3 and 4 seemed to have been aware of the concerns raised by the students and they also indicated that they have made efforts to address concerns.

Table 4. 28: Lecturer participants' responses about the perceived challenges that accompany running CP

Participant Pseudonym	Responses about the perceived challenges that accompany running CP
Lecturer 3	*"Trying to get the cooperation of the nursing sisters, the anaesthetists, the paramedics management of the ambulance services because you have got people on management positions who are still from the short course regime. They don't understand why these students need to work with an ECP and why they cannot work with an ECT. So those are the kind of things but I think by means of meetings and education inform them of what it is we are busy with at the moment"* *"We will have a mentor that we have identified out in CP, they will come and work with us on the road so that they can see how it works so having that relationship with them and being able to put our students with them"*
Lecturer 2	*"I would say CP needs to have a lot more involvement from outside the university."* *"I managed to help a student from graduation into working now and helping them with a mentor. I would love to see that happen with all the students, all the graduates through all the years. But I don't think it's going to happen tomorrow. I*

	think we will get there eventually in a couple of years"

The lecturers shared a need to have a round-table discussion amongst all role players and beneficiaries in CP in attempt to create equal opportunities for learning for all student groupings. The lecturers revealed that currently the arrangement for clinical learning was made between the Department of Emergency Medical Sciences and the management of the clinical learning areas. The university was said to not have access to the work force that work with students in order to directly communicate the needs of students, their capabilities and scope of practice. The lecturers further indicated that in order to mitigate the concerns related to prioritisation of students.; the university would needed to meet with the other universities that shared the same clinical platform, the clinical learning areas and the local Department of Health (DoH).

The aim of the meeting would be to formulate a working relationship that would enable all parties to work together to minimise the risk of competition amongst students and ensuring that the scheduling of students to a clinical learning area was as per university or department. This means the lecturers perceived clinical planning and implementation as a project that needed to involve all role players, stakeholders and beneficiaries. This may include discussions amongst the universities offering health sciences training with WIL like nursing and medicine; hospital personnel including representatives of clinical mentors themselves to ensure that the information is filtered to operational level effectively and efficiently. The DoH's presence might be required to indicate their training requirements which might help mitigate the high enrolment numbers and have enrolments tailored to the needs of the department. The DoH might also assist in enlisting emergency medical care service departments, healthcare centres and hospitals to participate in WIL on an official capacity and possibly offer incentives to clinical mentors and clinical learning areas for participation in CP.

This strategy might not only help minimise competition for resources amongst students; but it may also help prevent overcrowding in the hospital departments and the clinical mentors thus creating a conducive environment for learning as well as teaching.

The HPCSA might also need to be present at the gathering in order to possibly inform recommendations to CP offerings in light of the challenges perceived by CP lecturers. The HPCSA as an accreditation body might need to also inform universities on their enrolments in an attempt to avoid over population in clinical learning areas.

4.3.3. Theme L3: Lecturer Perception on Learner Support in CP.

Learner support was a theme that emerged in the student participant analysis. The students felt they needed the support in the form of a debrief especially following traumatic experiences in CP and that they would like to have the platform for formal debrief rather than going to the university student counselling department. Other students indicated their need for academic support, specifically on writing assignments, referencing, research and use of the online elements of the course not just in CP, but also in the course as whole. Lecturer 3 commented on the support that was available to students. She/he talked about how the university has ensured that there were clinical lecturers allocated to each year level made their work-load less and them more accessible to students where required.

Table 4. 29: Lecturer participant's responses about provisions made by the university to support students

Participant Pseudonym	Responses about provisions made by the university to support students
Lecturer 3	"*The university saw the need for that. The whole clinical team was appointed.*" *"We have done a lot, having a facilitator allocated to each year makes it you know a ratio of 1 to 30 more or less. It makes the workload a lot less and it makes it more personal."*

Lecturer 3 indicated that the university rolled out a survey on CP and that it prompted the need to change the CP offering to the current state. The third and fourth-year students had the flexibility and freedom to choose their own clinical learning area with the clinical mentor of their choice to help the students manage their own time and incorporate clinical learning with the course without compromising the students

and the rest of the course. This is an example of how the support students' ideas and seek to ease their experience of CP. The lecturer also indicated how the university hired more personnel specifically for the CP offering. There were four lecturers appointed to clinical by the university specifically for CP and each lecturer is dedicated to a specific year level. This helped ease the load of clinical learning administration and it also enabled the CP lecturers to manage specific years and have smaller classes which helped the university identify challenges of CP specific to the year levels. This afforded them easy access to lecturers where necessary and challenges are addressed timeously. Lastly, the lectures indicated that the university had started its own ambulance department that operates in the field with students scheduled to work on with lecturers to help mitigate the challenges that have been indicated above.

4.4. Summary

The data was collected, and the results have been presented above. This section discussed how clinical learning was implemented, monitored and the challenges thereof under the following themes:

a) How teaching and learning occurs in CP
b) Planning, monitoring and the cost of participating in CP
c) The Knowledge of clinical mentors n CP
d) Students' perceptions about learner support by the university EMS Department
e) Students' perceptions on discrimination in CP

It has emerged that there is more to CP than just attending clinical attachments. The students highlighted their concerns related to CP which included shortages of infrastructure to optimally conduct CP, the negative and positive attitudes of clinical mentor toward students as well as support by the department to optimally support CP. The students revealed that the shortages of infrastructure resulted in the competing with students from other courses for mentors, equipment and patients which possibly compromises their CP.

The students further indicated that the shortage of mentors presented them with opportunities to practice on their own without supervision; an opportunity they embraced without contest. The students also indicated that their perception of clinical mentors differs significantly. Some students indicated how well liked and treated they were by clinical mentors which they perceived to be a positive attribute to CP. They said they were afforded opportunities to perform procedures, ask questions and reflect on all they have done with that mentor. Some students revealed that mentors were rude and not welcoming. They further indicated that they were not comfortable enough to say or do anything and they perceived clinical attachments with said mentors to be a waste of their time. The student also shared that they would like the Department of Emergency Medical Sciences to foster relations with clinical learning areas that will offer them opportunities to learn; they believed the clinical mentors are not fully informed of their capabilities specific to the year levels and as such their perception was that they were not afforded sufficient opportunities to learn.

The students also indicated how monitoring of CP was time consuming to both the students and the clinical mentors in that there was paperwork in CP that the students and the clinical mentors must complete. The mentors and the students may not be able to fill out the documentation during a shift which may result in students not having evidence of attendance of clinical attachment or patient care. Some students also indicated that travelling during CP attachment is cost-intensive, and in some instances may affect their compliance and non-compliance with CP. Students who do not comply with CP requirements repeat the year.
The students also indicated that some clinical mentors displayed conduct that was discriminatory in nature and that gave them the perception that the mentors did not want to work with them.

Lastly, the students indicated that they needed support from the Department. They specified that they need financial support to cover the cost of travel related to CP. They also stated that they needed academic support for writing assignment and research as learning from their mistakes was time-consuming. Another form of support the students perceived as necessary was emotional support; they indicated that they would like to have official debriefing with their lecturers on a regular basis.

The students also commented on how they believe CP was beneficial to the careers as it helped them learn through real-life practice how they will function after university.

The students further suggested strategies that need to be in place to optimise clinical learning where the common idea was implementation of a mentorship program. The student-participant's results' and the lecturer participants' results were more similar and that was visible in the themes that emerged for both research groups. The corrective strategies suggested by the clinical lecturers were mature in that they showed appreciation that the perceived challenges may not be addressed at the level of the university and the clinical learning areas but rather at provincial government level where all role players needed to come together in an attempt to optimise clinical learning for all. The next chapter seeks to interpret the meaning of the findings and determine whether the research question and sub-questions have been answered.

CHAPTER 5
DISCUSSION

The aim of the research was to identify the perceived strengths and weaknesses of CP and, consequently, to inform recommendations to enable the CP subject offerings in the four-year BEMC degree at a South African University of Technology to provide optimal WIL opportunities for students. Chapter Four provided a detailed analysis of the data. The purpose of Chapter Five is primarily to discuss the meaning of the findings provided by Chapter Four. In looking at the data, a secondary discussion will follow, namely whether or not (and the extent to which) the following research question and sub-questions were as stated in Chapter One, answered:

"What do BEMC lecturers and the senior students perceive as the strengths and weaknesses of the CP subject?"

The research sub-questions were:

- **What are the lecturer's perceptions of the CP subject?**
- **What are senior students' perceptions of the CP subject?**
- **In what way can the perceived strengths of CP be built upon and the perceived weaknesses be addressed?"**

The structure of the chapter will begin with the discussion on the CP perception of both lecturers and senior students combined and the differences in perception are highlighted where applicable. Thereafter, the discussion on the perceived weaknesses and the perceived strengths will follow. Lastly, the discussion on "in what way can the CP perceived strengths be built upon and weaknesses be addressed?" will ensue.

5.1. What are the BEMC Senior Students and Lecturers' Perceptions of the CP Subject?

To look for meaning in the data, I will firstly address the main question: "What are the BEMC senior students and lecturers' perceptions of the CP subject?"

The analysis in Chapter Four showed that the following are the strengths of the CP subject:

- CP within the BEMC is important and adds value to the overall BEMC education and training
- CP makes a positive contribution to participants' career development with the opportunities to put theory to practice in real-life situations
- Students learn industry practices and traditions and undergo "enculturation"
- CP builds student confidence and the expertise required of independent emergency care practitioners.

Thus, the data revealed that both lecturers (CP instructors) and the senior students perceive that CP within the BEMC is important and adds value to their overall BEMC education and training because it is a vital extension thereof. This means that the CP subject as offered by the EMS department that formed part of this research, is on track as an effective CP subject in the BEMC degree offered by this particular university.

The positive perceptions of CP by both lecturer and students also revealed that the University appreciates the value of CP which makes it easier for senior students and lecturers to work together in establishing and maintaining an effective model of CP within the BEMC.

The strengths, as outlined above, concur with the findings by Govender and Wait (2017); Wessels (2014), Lekhuleni *et al.*, (2004) and O'Shea (2014). The strengths also resonate with the educational theories posited by Kolb and Kolb (2005) which relate to project implementation and work participation. Project implementation is where students design, deliver, manage or evaluate a specific project as part of their work experience. Students in BEMC participate in a work participation model of WIL where the students contribute to the day-to-day activities of the workplace. The literature review revealed the benefits of WIL and how it helps students learn from real life work settings, improves the confidence and also allows students to learn and understand industry practices and traditions.

The data collected revealed the same findings as appeared in the literature review, namely that the students and instructors agree that WIL affords students opportunities to learn from real life experiences by working on real-life patients in real time, putting into practice what they learnt in class and thus building the confidence and expertise required to be independent practitioners.

A further point to be noted is that because both the students and the lecturers indicated a positive perception of the CP subject, its relevance to teaching and learning as well as the future careers of the students becomes apparent. Hence, lecturers are also more likely to find it easier to coordinate the programme as they are dealing with students who understand the need for and, indeed, the value of participation in CP. This concurs with the findings of Carlson, Wann-Hansson and Pilhammar (2009) that its greatest strength is that both lecturers and students value it as a very important teaching and learning method. In addition, this research finding supports those of Garcia-Jordan *et al.* (2011) whose study showed that students viewed the programme as useful and that it facilitated interactive learning where the objectives did not promote memorisation, but rather encourage students to think critically and make decisions in patient care.

The BEMC students described how CP enabled them to be embedded in the real-life situations where they have to treat patients and make split second decisions in order to save lives. They further indicated that they were afforded an opportunity to take the lead as a commanding practitioner in a motor vehicle accident. The student in this case will have to oversee the care of patients as well as management of the scene. They also experience what happens in the real-life setting of emergency care with regard to mismatch between practitioners, equipment and patients. Using the example of a motor vehicle accident (MVA) as mentioned above, the student may have to take the role of an incident commander, a role mostly played by the highest qualified practitioner on scene. This role may require the students to coordinate a patient rescue and treatment efforts especially in multiple casualty incidents.

The requirements of the rescue and treatment are determined by the number of patients, their injuries and the availability of resources. The students may have to make decisions on the type of resources required and have such resources activated. In an MVA the traffic department and the fire department may be called to manage traffic and extricate patients respectively. The findings concur with Kaider *et al*. (2017), however they caution that WIL should not only capacitate students and graduates with the professional skills required to be competent practitioners. Kaider *et al*., (2017) further revealed that WIL participants need to gain communication skills, confidence, teamwork capabilities, and the ability to take initiatives, exercise problem-solving skills and self-manage amongst others.

Working in real-life setting, exposes the students to challenges that accompany working as emergency medical professionals. The challenges include difficulties accessing the resources required for effective rescue and possibly conflict resolution on scenes. In MVAs with multiple casualties, the scenes may become resource-intensive and rescue attempts slowed down taking longer than anticipated. The students' endurance may be tested, as they may spend long periods on the same scene not eating and drinking. This supports the findings by van Wyk *et al*. (2015) that the environment the EMS practitioners treat patients in is unpredictable and that one can never be completely prepared for.

From the description of WIL given by the students and lecturers, what it entails and what it can achieve for students and graduates, it is clear that WIL is "hard work". This is a sentiment shared by students who participated in a study by Garcia-Jordan *et al.,* (2011). They indicated that the curriculum that has problem based learning significantly increases the workload and stress, where if not well managed may result in students being unable to successfully completing the year. This realisation that WIL is hard work is important because it means that students have to learn to factor this into their studies and lives by learning to manage their time as effectively as possible.

The data revealed a further strength of WIL, namely that the students become familiarised with policies that govern emergency medical care as a whole, as indicated in the academic literature by O'Shea (2014). This means that BEMC students learn the value of policies such as the Health Professions Act which governs what medical professionals must do regarding caring for the sick and injured (Health Professions Act, 1974). The South African patients' rights charter also describes the patients' rights and requires that they may not be violated. Some of the rights are easily violated unintentionally like the "the right to be treated by a named practitioner", is violated if the practitioner does not have a name tag or simply not introducing themselves. This may seem a small thing, but its value lies in the fact that it requires the students to pay attention to detail, no matter, how insignificant that detail may seem. The Health Professions Council of South Africa sets out the scope of practice of emergency medical care practitioners in their CP guidelines (Health Professions Act, 1974). The HPCSA describe the drugs and treatment procedures specific to emergency care practitioners, and through WIL students are empowered to translate the theoretical knowledge they have learned in class to practical pre-hospital situations.

The data revealed that the students' moods, attitude and confidence in WIL are influenced by their interaction with the clinical mentors. Clinical mentors, who demonstrate positive efforts towards WIL and stimulate students, tend to be more proactive in WIL (Grogan *et. al.,* 2013). They encourage students to perform tasks and to volunteer to perform tasks. The students' confidence in patient care also improves in the vicinity of such individuals. A positive attitude is said to be contagious; therefore, students can observe the welcoming attitude of the clinical mentor and respond by themselves being more positive and eager to learn instead of waiting for the placement to finish (Grogan *et. al.,* 2013).

An additional and important strength of this university's CP came to light, namely that the students are responsible for placing themselves and generating their own schedules in CP. The students feel that this empowers them in that it allows them to think about their competing interests and plan their placement and time management. The empowerment of students that happens here adds to the value and meaning of the CP subject.

Notwithstanding the above strengths, the subject needs to be informed and developed further considering what the data revealed about weaknesses of CP. The next section will discuss the meaning of the perceived weaknesses.

5.2. What are the Perceived Weaknesses of CP?

The perceived weaknesses in CP to be discussed are as follows:

a. Capabilities of CP areas to support the programme
b. Cost intensity of participating in CP in the BEMC
c. The knowledge of clinical mentors on CP
d. Perceived limited student support by the University EMS Department
e. Perceived discrimination in CP

A discussion of each of these areas follows below.

5.2.1. Capabilities of CP Areas to Support the Programme

The students discussed the concept of learning during CP. The students revealed that they believe teaching and learning in CP is influenced by three factors:

(i) The willingness of the clinical mentors to teach
(ii) The availability of resources and
(iii) The relationship between the mentors and students.

Clynes and Raftery (2008) indicate that student feedback by the mentors is an essential part of teaching and learning in WIL and that inconsistency in giving feedback have the potential to negatively affect learning. Feedback to students is said to improve student confidence, motivation and self-esteem and their overall CP (Clynes and Raftery, 2008). Ineffective feedback processes may be due to inadequately trained mentors, unfavourable clinical learning environments and insufficient time spent with the students (Clynes and Raftery, 2008). This speaks to students' experiences that there are some clinical mentors who are not willing to teach. The students stated that they are on occasion, denied opportunities to learn in CP. Clinical mentors demonstrate their disinterest towards working with them.

The disinterest to mentor students could possibly be due to reasons listed above by Clynes and Raftery (2008). The disinterest in teaching by mentors has the potential to create a hostile working environment, as shown by Evans (1997) who states that negative attitudes from clinical mentors create a hostile working environment which decreases the productivity in CP and thus negatively impacts teaching and learning objectives of CP. CHE (2011), Wessels (2014) and Kramer and Usher (2011) all agree that WIL improves students' academic performance, communication skills, positive work values and employability.

The risk associated with an unconducive environment is that students may become resentful towards a CP area or mentors and not seek to comply with CP (Schneider and Stier, 2006). Non-compliance with CP means the student will not learn from the experience, which will result in the student failing the year. Moodley (2016) indicated in his study on paramedic students engaged in WIL that there was no formal structure for paramedic mentoring and that ordinary EMS practitioners are expected to mentor and teach students without prior training and orientation on what is required from them as mentors. In addition to mentoring, the clinical mentors are also expected to meet their own job requirements which if they are not compliant with, may result in the mentors having negative attitudes towards students (Moodley, 2016). Possible reasons that could play a role in their attitudes include:

- The clinical mentors are enlisted by the companies they work for to participate in WIL but not as core business and therefore, they may not be positive towards WIL;
- The university does not compensate clinical mentors in any way for mentoring students during CP yet,
- Mentoring requires commitment and is time consuming (Lerman, 2014).

The above rational conjecture may also contribute to the possible negative attitude the mentors have towards students. O'Shea (2014) recommends that the CP areas be viewed as partners and not just placement areas so that all stakeholders can work towards the same goal.

Shortages in clinical mentors are attributed to emigration of professionals and the strict protocol to immigrating practitioners (Nkabinde *et al.*, 2013). Lekhuleni *et al.* (2004) and O'jaha (2010) further stipulate that shortage in mentors arises from an overall shortage of practitioners and that the clinical mentors regard the students as the work-force instead of protégés that need mentoring. The shortage in clinical mentors specifically affects third- and fourth-year students as available mentors may not be qualified to perform procedures in their level. This implies the students are not likely to get the opportunity to perform the affected procedures and fulfil the CP requirements.

A further weakness in the work placement area is overcrowding, possibly due to shortages in clinical mentors. The BEMC facilitates WIL through participation in clinics, hospitals and ambulance services. Other health sciences students such as nursing, medicine, physiotherapy and clinical associates also undergo WIL in clinics and hospitals (CHE, 2011). The degree of sharing of the in-hospital WIL environment results in overcrowding in CP areas. A combination of a shortage of clinical mentors and a high number of students placed at CP areas at the same time results in inadequate supervision of the students (Lekhuleni *et al.*, 2004). Inadequate supervision of students results in the students to performing procedures without adequate supervision (Bola *et al.*, 2015; Econex, 2015).

In addition to inadequate supervision, overcrowding at WIL areas, according to CHE (2011), affects the commitments of companies towards WIL. The companies revealed that overcrowding of students slows their productivity (CHE, 2011). This tends to make companies reluctant to participate in WIL. Moodley (2016) revealed additional challenges related to having students from other medical disciplines in the same clinical environment at the same time. The students (in Moodley, 2016) reported that preference was given to students in the same field as the clinical mentor thus limiting the exposure for paramedic students (Moodley, 2016). The preference was said to be given to nursing and medical students.

The competition for skills and preference of mentors potentially perpetuates poor supervision of BEMC students and hampers their progress towards fulfilling the CP objectives. Henderson *et al.*, (2011) support the notion that non-participation in CP and lack of access to patient care may lower the students' confidence as well as overall academic development. Failure to fulfil CP objectives results in students having to repeat the year.

Mackaway and Winchester-Seeto (2011) showed that in Australia students get access to the WIL host organisations through four methods: (i) random allocation by the academic institutions, (ii) allocation by the institution based on criteria set by the host organisation, (iii) student application to the organisation as well as (iv) selection by the organisation from a list provided by the academic institution.

The first three methods ensure that the companies are involved in placement of the students and are thus in control of the numbers of students placed in the company at a given time. Though this may be seen as a way to mitigate overcrowding in WIL, Mackaway and Winchester-Seeto (2011) indicated a disadvantage to WIL in that it may limit students' access to WIL. The companies are said to set criteria that allow certain types of students' access to WIL while other students may be excluded (Mackaway and Winchester-Seeto, 2011). In a bid to avoid having to fail the year the students might be forced to work extra hours outside the scheduled CP attachments thus increasing their workload, increasing time spent on CP may compromise other subjects offered in the course.

In considering the significance of these three areas of weakness in WIL as described above, it is noted that they impact on the effective teaching and learning of the CP Subject. This means that the shortages in mentors, unwelcoming attitudes of mentors and unavailability of resources required for effective teaching in CP potentially compromises the programme. The students are possibly not effectively monitored and that means there is no guarantee that the students are learning meaningfully in CP. These weaknesses need to be addressed not only to enhance WIL but to see to satisfaction of the clinical mentors. The weaknesses revealed have the potential to frustrate the employees of affected services.

This could mean that the attitudes of mentors, their willingness to work and not enlisting to do additional work are a sign of their unhappiness with their work environment.

5.2.2. The Knowledge of Clinical mentors of CP

The students and the lecturers have not indicated challenges in placement of students in workplaces. The clinical learning areas are supportive of the programme and they avail the workplaces for BEMC WIL. The clinical instructors indicated that the administration of WIL is reliant on communication between university and the clinical areas. There may be challenges with the information specific to BEMC WIL reaching the clinical mentors at the operational level. The mentors thus tend to rely on students to inform them on their capabilities and procedures they able to perform. This makes mentoring of BEMC students ineffective as mentors will not be able to effectively teach (Ramani and Leinster, 2008) and students will not be able to seize opportunities to learn as mentors may not be adequately prepared for the task.

Ramani and Leinster (2008) revealed that clinicians are often not aware of educational mandates from universities, clinical bodies as well as licencing and accreditation bodies and that this has a major impact on training. This situation of clinical mentors being ill-informed may frustrate the students, and the students therefore use their skills requirement documentation to show their capabilities. Clinical mentors are mostly very well-trained practitioners and their capabilities as practitioners may not be doubted (Ramani and Leinster, 2008). The issue comes in when it comes to teaching in CP as they most of the time assume the task with no formal preparation (Ramani and Leinster, 2008). The mentors are expected to provide information, facilitate learning, assess and be role models to students without training (Harden and Crosby, 2000). In addition to mentoring and teaching students the clinical mentors have to mind their own CP (Ramani and Leinster, 2008), which may prove difficult.

The impact of this situation as indicated by students is that they may not be allowed to perform the procedures as the mentor could possibly not feel comfortable to let the students perform the procedure. On the other hand, the students may possibly

be exposed to opportunities of performing procedures that are beyond their capabilities. Both of these scenarios have the potential to negatively affect the outcomes and objectives of WIL. This is significant because it means that the most important effect is hindering the student from meeting the teaching and learning requirements of WIL.

Burns *et al*. (2006) talked about teaching strategies in clinical learning. They describe two strategies which are the ‘sink or swim’ approach and the manipulated structured approach. The ‘sink and swim’ approach means that students are expected to work on their own with the mentor taking the overall responsibility, while the manipulated structured approach means the mentor will present the students with opportunities to learn based on their previous experience (Burns *et al*., 2006). The description of student interaction with the mentors in hospital means the students are confronted with both strategies as it depends on how comfortable the mentor will be to let the student practice on patients.

The strategies are said to work towards developing clinical competence and confidence, however the question is not whether the mentors are academically and pedagogically competent. *The issue is that the mentors are not sure what they are expected to teach.* This important finding means the students are not intentionally put in positions where they will actively learn, and they are potentially attending some of the attachments to satisfy the course requirements. They are possibly not having meaningful encounters with those mentors. Clinical mentors need to be educated and oriented on the course as well as the capabilities of students relevant to their year of study levels in order to enable the clinical mentors to facilitate discussions on patients’ care and diagnosis, to encourage students and give them the tools required to address student challenges and evaluate the students, as noted in the literature by Anderson (2011). Clinical mentors need to know what is expected of the students and them. This means that there is a need to educate and orient mentors on the course content and the expectations of the university as well as their role in CP.

5.2.3. Cost-implications of CP

The literature in Chapter Two revealed that the implementation of a WIL programme is cost intensive. CHE (2011), Haddara and Skates (2007) and SABPP (2014a) state that some models of WIL such as internships, co-op programmes and sandwich courses are WIL programmes that offer a form of payment to students. The compensation is not a salary but rather a stipend to enable students to cover the costs of travelling for WIL and possibly lunch (Dev Degree, Online).

The data analysis revealed that CP within the BEMC is a non-paying programme and all costs related to CP are carried by the students themselves. CP placements are not informed by their proximity to the students' residence. Students rotate amongst the areas (near or far) and there is no provision for transport by the university. The students bear the cost of public transport or fuel (if they have a car) when travelling to the CP areas. These findings resonate with those of Lewis *et al* (2010) that WIL is cost-intensive. These researchers reported that companies also have cost implications for their participation in WIL. WIL slows their productivity as they have to train the protégés (Lewis *et al*., 2010; Cullen, 2007). This makes them reluctant to participate in WIL. Students have no choice but to participate in CP as it is a qualification requirement, but not having money to travel may result in poor compliance with CP.

Long commute to the clinical learning areas may also be associated with health risks (CloseCommute systems Inc, 2018). Health risks associated with long commute include obesity (Jacobson *et al*., 2011), stress, anxiety and depression (Hammig *et al*., 2009). Traveling long distances my also affect the students' social life where it may put strain on relationships and increase risk of conflict (Sandow, 2011). It is important to note that participation in CP has negative financial implications, health risks as well as negative social impact for the students.

An online EMS education data collection system, the Field Internship Student Data Acquisition (FISDAP) is used to monitor compliance with CP. It enables students to register their clinical attachments, upload patient information and submit any work related to CP like journals and shift reflections.

The campuses are mostly equipped with free Wi-Fi for convenient access to FISDAP. Students living off-campus may not have access to the internet required for FISDAP except when on-campus. This means that students may have to buy expensive mobile data in order to access FISDAP at their place of residence further increasing the cost of WIL participation. With regard to inability to buy the internet data to work on FISDAP, they might miss deadlines for submission through FISDAP thus resulting in poor performance in CP which may lead to a student repeating the year.

Students coming from families that are financially well off are more likely to cope and comply with CP and its requirements. Students who come from poverty-stricken homes where the students are the hope for the family to escape poverty have a challenging experience. These are mostly bursary or financial aid students, possibly living on campus only to be confronted with financial burden of CP, bearing out-of-pocket expenses. If such students struggle to meet the financial demands of CP, they may end-up resenting participation in CP which might make them more likely not to comply with CP requirements.

Resentment is defined as "negative sentiments relating to grievances, injuries, patterns of unfair treatment, violation, unfulfilled or frustrated desires, and, most generally, unjustified suffering at the hands of another or others" (TenHouten, 2018:1). Students resenting CP may become frustrated, angry and displeased by CP and the course as a whole (TenHouten, 2018). Jacobs (2015) concurs that the increasing financial cost of CP may have psychological effects (helplessness and resentment) that may affect the students' overall performance and thus put the students at risk for failing and dropping out of the course.

In cases where students do go to CP, their morale might be low, they might not show interest in CP as their perception of CP might be altered (Samadi, 2013). When students resent the course, they will end up having one of two proposed reactions. The students may (i) contemplate rebelling against the course or (ii) believe that they are powerless (Smith, 2000). The latter reaction is most likely as the students' agency may be affected because they may believe that there is nothing, they can do to change the situation and thus remain helpless and do not act against the situation

that is causing the resentment (TenHouten, 2018). Once the student feels helpless and powerless the student will become unhappy (Smith, 2000). TenHouten (2018) further indicates that this powerlessness makes them prone to lack understanding of the objectives and they thus may underperform. In such a case they might view CP as more of a financial burden than a learning opportunity.

Where students are able to afford to go to CP attachments and the mobile data for FISDAP, they might not have enough money other things such as food causing them to develop unhealthy eating practices. Unhealthy eating plans are associated with fatigue, dizziness and disorientation which affect the concentration and overall performance of the affected individual (Ross, 2010).

There are other cost implications of WIL other than financial. The students also revealed that CP takes time away from other subjects where they have assignments, exams as well as pre-reading. They indicated that the work-load leaves them with limited time to socialise and even to sleep. Socialising is said to be important for the individual's overall health, happiness and overall feelings of connectivity (Cohut, 2018). This means one of two things the WIL is so time-consuming that students have less time to do any other course work or the students have poor time management skills. Any one of these scenarios has the potential to result in poor performance.

5.2.4. Perceived Discrimination in CP Domains

According to Markie and Smith (2002), discrimination refers to "the positive or negative behaviour towards a social group and its members". The most common forms of discrimination are said to be racial, sexual and religious in nature (Al Ramiah and Hewstone, 2013). To this list there may be added language discrimination (especially in Higher Education) which has long been a topic of much debate in South Africa. Bazana and Mogotsi (2017) explored the cultures in historically white universities and their effects on non-white students. Their study found that though the historically white universities claim to have integrated beyond apartheid discrimination, the cultures and traditions practiced in the universities are said to be discriminatory against non-white students.

This alienates them and possibly results in them being negatively affected both socially and psychologically which negatively affects their performances (Bazana and Mogotsi, 2017).

Essed (1991) talks about the concept of ‘everyday racism’ where there are certain cultures, practice and traditions that are discriminatory in nature that people may be complicit with. Such practices may be perceived as normal. While the individuals concerned may not be physically affected, they would still be affected in other ways. Freeman and Stewart (2018) describe the concept of micro-aggression as *“…*verbal, nonverbal and/or environmental slights, snubs, or insults that are either intentional or unintentional; they convey hostile, derogatory, or otherwise negative messages to target persons based upon their membership in a structurally oppressed social group*”*. Micro-aggressions and everyday racism may not necessarily be *active* acts of discrimination. Examples include a ‘white’ person telling a ‘black-African colleague that they are well-spoken as if black people are not expected to speak well. Some people may take that comment as a compliment but in racialised discourse, it is not. The person making the comment is actually surprised that a black person speaks well and that is discrimination in relation to a particular characteristic.

Another example would be people speaking a language one does not understand in one’s vicinity; they are not concerned in making one part of the conversation thus alienating one socially and consequently making one feel like one does not matter. In both examples the acts may be unintentional, passing a comment or just a couple of people going about a conversation who may believe that since they are not talking to anyone in particular, then it is acceptable for them to speak a language another does not understand. However, the harmful effects on the affected persons are real and should not be ignored. People who perceive others’ attitudes as discriminatory tend to have their lives negatively impacted by the discrimination (APA, 2015). They report that discrimination may result in mental health effects where the individual’s general well-being is compromised, they become prone to anxiety; their self-esteem may decline resulting in declining social behaviour, depression, stress and feelings of loneliness (APA, 2015).

In the data analysis it was shown that there are a few students who believe they have been discriminated against in CP. These students felt that they were discriminated against in relation to language. The students reported that they experienced discrimination which stemmed from being unable to speak or understand a particular language; in this case Afrikaans and isiXhosa[7]. They said that they felt ignored and were left out of conversations related to patient care due to their language constraints. This is an important finding because it means that when students perceive the clinical mentors as discriminating regardless of the nature of the discrimination, they might be less inclined to interact with the mentor for the duration of the clinical attachment which may possibly result in the CP teaching and learning objectives not being met. If the students are paired with the same mentors whom they perceive to be discriminatory, they could experience the discrimination over a long period of time.

Any situation that has a potential to affect one's self-esteem and self-confidence may hamper one's progress and affect one's performance negatively. This means that these students might be less inclined to participate in clinical learning, and they could be less likely to volunteer to perform tasks or demonstrate their capabilities. They possibly would not be able to interact socially with mentors and their interaction with patients during patient care might also be affected as reported in the literature by McCule and Smith (2002). In summary, any form of discrimination, if not addressed, may negatively affect the students' overall well-being which might in turn affect the way the students perceive CP and cause the students to perform poorly academically.

5.2.5. Perceived Limitations in Learner Support by the University EMS department

The students indicated in the data that they need support structures to help them cope with the course workload and CP. They stated that they encounter horrific incidents and sensitive cases that leave them "traumatised".

[7] In 1994 first universal elections were held in South Africa which saw a new constitution in 1996 that included 11 indigenous languages as official languages (UNICEF, 2016). These languages are English, Afrikaans, isiXhosa, Sepedi, Setswana, isiNdebele, isiSwati, isiZulu, Tshivenda and Xitsonga.

They would like to have some form of official feedback and debriefing sessions with the lecturers and possibly receive coping strategies for helping to alleviate effects of such encounters. Miller (2009: 7) describes debrief as “a structured group process that responds to cognitive, emotional and social reactions resulting from disasters and other traumatic events”. The latter description of debrief is more applicable to the context of the research the students are not looking to be interviewed but rather an opportunity to have a group discussion with their peers and lecturers and share their thoughts on the different encounters in the WIL environment.

Debrief is a method of compiling formal reports of an event, it helps encourage reflection and has the potential to reveal information that would not surface in a written report (UNICEF, 2015; Miller, 2009). Miller (2009) further indicates that debriefs provide opportunities for exploring and making sense of an event or experience determining what went wrong and what needs to change or improve for next time. The students described the need for the opportunities described by Miller (2009). They further believe “debriefing” sessions will help them gain access to clinical instructors to reflect on what is happening during WIL and to find out from the instructors how they would deal with similar encounters.

Another form of support the students perceived as necessary was academic support. The students revealed a need for a formal platform to orientate them on the use of the university online domains. They indicated that the difficulties in accessing learning material online sometimes resulted in them missing deadlines and not being able to access study material and thus obtaining negative results for assessments. For students to feel a strong sense of belonging and succeed, student engagements debates need to take background, ethnicity, age, gender and socio-economic statuses into consideration (Thomas, 2002). This means that student engagements and support structures should thus attempt to cater for the diversities in students (Kuh, 2009). A study by McClure (2011) reveals that orientation is effective in preparing students for success and that communication, programme guidelines and learning activities were helpful.

5.3. Building Upon Perceived Strengths and Addressing the Perceived Weaknesses

The first two research sub-questions were answered above. The research sub-question "in what way can the strengths be built upon and weaknesses addressed to improve the CP?" To build upon the strengths of CP, the students and clinical instructors suggested that the clinical mentors be made an official part of the programme where they sign up to be official mentors and have them recognised as part of the course. Smith and Betts (2000) concur, they recommend a transparent and negotiable WIL collaboration between the institutions and the WIL partners. The collaboration will allow all stakeholders to share the same vision for WIL and work together towards achieving it.

Ramani and Leinster (2008) also indicated a need for formal training of the clinical mentors. They further indicated that formally training clinical mentors and orienting them on the training strategies as well as content of the course will help ease their burden as mentors. Billet (2009) made the same suggestions that clinical mentors need formal training to capacitate them with the capability to teach.
Kolb and Kolb (2005) described the different teaching strategies in WIL and the clinical mentors need the capability to employ them in practice.

Students revealed the need for clinical mentors be informed on the CP guidelines (CPGs). The students suggested the use of workshops to educate the mentors on the latest evidence in patient care. These findings resonate with the findings by Spencer (2003), he revealed that the majority of clinical mentors are exceptionally trained clinicians who have their primary tasks as professionals and they may have not been trained as educators (Steinert, 2005) or oriented on policies stipulated by regulatory bodies (Ramani and Leinster, 2008) such as the HPCSA.

Clinical mentors are required to participate in opportunities of continuous professional development (CPD) activities. Participating in the CPDs is time consuming and expensive if done privately. The university may offer the activities for free or at a discount to practitioners who enlist to mentor students.

That would motivate mentors and companies to enlist to participate in WIL. Ramani and Leinster (2008) also suggests involvement of training institutions in training clinicians to be educators and orienting them in course structures as well as policies governing the courses and the practice of students thus enhance CP. O'Shea (2014) indicated the use of workshops and seminars as platforms for educating clinical mentors on the course, policies governing the course as well as the learning outcomes for students in WIL.

Involving the mentors in the programme and incorporating the training in the programme may serve as a form of incentive as the clinical mentors are not paid to participate in CP and supervise students on WIL. The incentive could possibly also result in mentors being more inclined to work with students and it might also encourage mentors to enlist to the programme if there are incentives. Offering incentive to clinic mentors cannot fall solely on the university; industry role players must also play their role. Participation in CP is after-all a requirement set by governing bodies (CHE, 2011). The national department must also offer incentives to practitioners participating in WIL. This means policy needs to be generated in order to encourage (and in some respect force) practitioners to participate in WIL (O'Shea, 2014).

The data also revealed additional potential strategies to help address the perceived weaknesses. Below are the suggestions to address weaknesses in CP:

a) Implementation of allowances to help cover costs that accompany participation in WIL.
b) Setting the WIL schedule with consultation with other health sciences course offering to maximize student exposure and avoid overcrowding.
c) The university must enlist mentors who are willing to mentor students and that they should understand and accept that the students on the course are from different countries, ethnicities, sexual orientation and race.
d) Educating clinical mentors on the course content, learning outcomes, clinical learning policies and student capabilities.
e) The scheduling of WIL attachment with a specific mentor should be over a set period and not a day.

All these strategies are good in theory, but it is irresponsible to just simply say they must be implemented in order to make CP better. The feasibility of the implementation of the strategies needs to be assessed. Recommendation B, C, D and E appears achievable at the university level. Where the university may spear head the education and orientation programme that seek to orientate the practitioners on the course and the capabilities of the students. All role players and beneficiaries of CP must come together and formulate a strategy to best share the already constraint clinical platform. This will help run a coordinated programme and avoid overcrowding.

Implementation of allowances is also a good in theory but implementation of such a programme may prove difficult for the university. One would need to determine where is the money going to come from? Who is going to fund this money? Which students must get them allowance and whose responsibility is it to ensure the students have allowances? What ways would need to be employed to ensure continuous cash-flow? In an Australian paramedic training programme, the WIL is divided into paying and non-paying clinical placements (Hou, Rego and Service; 2013). Students are paid by the companies they are placed into. Even with the paying programme compliance still remains an issue. To address this matter the colleges implemented other non-cost intensive measures to implement CP.

They make use of video reviews of simulated scenarios that allow students to interact and reflect on it and find course of actions. The use of high-tech mannequins in classroom education to simulate on-road and emergency room scenarios (Boyle, Williams and Burgess; 2007). These simulations are said expose students to life-like emergency situations (Conradi, Kavia, Burden, Rice, Woodham, Beaumont, Savin-Baden and Poulton; 2009). The disadvantage of use of such equipment requires specialised training and equipment which may be costly (Conradi *et al.*; 2009). The videos and simulation are viable way to address the burden of cost of compliance with CP. They will not only address the financial burden, but they may also address the shortage of infrastructure and augment CP and mitigate the risk of placing students in the already cramped CP space.

The data did not reveal a strategy to address the discrimination taking place in CP. Williams and Waxman (2006) revealed the need for training of ambulance staff and clinical mentors on professional practice after determining that the students were ill-treated at bases. Impact made by a CP not only affects the BEMC programme but also affects the perception of students towards that company as well as their choice when seeking employment (Williams and Waxman; 2006). Students need to be oriented on their rights as indicted in the constitution.

5.4. Limitations of the Study

The study has limitation as with other researches. The data collection was confined to one university and therefore the results are only specific to the area of study. Emergency medical care education is still in developmental stages in South Africa, the literature review was thus based on international studies that may not be applicable in the South African context. Lastly the study participants included the lecturers and senior BEMC students, the clinical learning mentors were not part of the study as such their perception on WIL has not been recorded.

5.5. Summary

This chapter primarily looked at the meaning and significance of the findings. It was seen that meaning relates mainly to the following issues in the CP subject, namely:

- These **strengths,** as outlined above, concur with the literature discussion in Chapter Two as shown in the discussion. These strengths also resonate with the educational theories posited by the literature around WIL as described above.
- The **positive perception of CP** by both participant lecturers and students also revealed that the University appreciates the value of CP which makes it easier for the senior students and lecturers to work together in establishing and maintaining an effective model of CP within the BEMC.
- **Teaching and learning** in CP is influenced by the attitudes of the clinical mentors and they willingness to teach. The students get presented with learning opportunities in purposeful and well-organised manner. They thus have a meaningful experience in CP.

Pre-hospital Emergency medicine is both a vocational and a professional calling. Therefore, students have to be prepared to learn not only the theory; but have to learn to apply that theory in practice by emulating real-life situations/scenarios. The study revealed the general perception of CP and strengths are that:

- Students are prepared for the workplace through exposure to real-life scenarios and they get to know about the policies, protocols and procedure. Students are well on the road to becoming independent practitioners because it helps them build their confidence, the use of FISDAP is not only for compliance with WIL but it also teaches them to record keeping skills. They also organise their own placements making them accountable and responsible practitioners upon completion of their studies.

The study also revealed weaknesses that have to be addressed by the EMS department. The weaknesses were said to be:

- Shortage of infrastructure to support health science WIL,
- Financial burden that accompanies compliance with CP
- Clinical mentors not being well oriented on the course content and the capabilities of BEMC students.
- Unfair discrimination against the students,
- Insufficient academic and social support to the students.

The weaknesses if not addressed effectively have the potential to negatively affect the attitudes of students towards WIL. This may result in students attending the placements to comply with course requirements instead of investing in it and learning both actively and intentionally from the experience.

This chapter also intended to determine whether the research question and sub-questions were answered. Both the research question and the sub-questions were answered. The following chapter will discuss the recommendations arising from the findings and make the conclusion on the study.

CHAPTER 6
RECOMMENDATIONS AND CONCLUSION

In the previous chapter the findings of the data analysis were discussed. This chapter seeks to make recommendations on the findings discussed above and derive a conclusion.

The aims of this research were to identify the perceived strengths and weaknesses of the CP subject and, consequently, to inform recommendations to enable the CP subject offerings in the four-year BEMC degree at a South African University of Technology to provide optimal WIL opportunities for students. The findings of this research may not necessarily be transferable to other institutions offering the BEMC because although the WIL model may be implemented to the satisfaction of the HPCSA, institution-specific weaknesses and strengths may differ. However, notwithstanding the institutional capacity, the macro/societal issues raised, such as discrimination and student poverty, are of relevance.

6.1. Recommendations

Based on the evidence gathered during this study, the following recommendations are made about improving the perceived weaknesses:

6.1.1. Recommendation 1: The Capabilities of Clinical Learning Areas To Support the Programme

To sum up, the following weaknesses were identified. There are insufficient clinical mentors to establish a one-on-one mentorship programme in CP. The clinical mentors are not compensated for their participation in WIL. In addition, some do not volunteer to be part of the programme; rather the companies they work for enlist them to be part of WIL out of civic duty or corporate social responsibility.

- Additionally, practitioners with the expertise required also need to be enlisted, strategies need to be in place to encourage their participation in WIL. In response, there are strategies the university may employ to encourage positive attitudes of mentors.

- The strategies may include offering free or discounted training programmes for clinical mentors. This may help encourage mentors to participate in CP and supervise students effectively. This initiative, if implemented, may also serve as a platform to teach mentors new practices and evidence-based practice that is in line with the curriculum and ensure that the experience in the field complements classroom learning.
- The university may also formalize such activities to bear continuous professional development (CPD) points. All healthcare professionals registered with the HPCSA is responsible for updating their own knowledge to the latest evidence and to remain current in their practice (HPCSA, 2018). Participation in such academic activities earns participants CPD points which are used to prove compliance with HPCSA requirements for ongoing knowledge updates as well as retraining in their current practice. Healthcare professionals are required to accumulate 30 CPD points per year. Although, there are formal institutions that offer courses, workshops and updates with CPDs, all indications are that additional and convenient opportunities are welcome. Conferences may also offer CPDs for attendance. The institutions and the conferences are seldom without cost, having the universities offer them free of charge will likely encourage clinical mentors to participate in the workshops and clinical learning. This is in the spirit of reciprocity.

The data revealed that the CP areas are not utilised by the BEMC students alone, but rather that the different disciplines in health sciences share the areas. The clinical learning areas are overcrowded due to that. The obvious strategy is to build more hospitals, train and hire more clinical mentors. However, that strategy is not in the scope of the university. The university needs to seek interventions that are feasible and achievable.

- One way of improving CP is by seeking ways to mitigate overcrowding in WIL areas and ensuring rotations that affords students from all health sciences programmes mentioned equal opportunities at WIL.

- The CP subject coordinators must allocate the available resources efficiently. All stakeholders and the beneficiaries across all courses that participate in WIL in a defined region need to have a round-table discussion to configure a way to best utilise the limited platforms. The discussions should also include optimum ways to share the platforms without compromising one another.

- The South African Department of Health must also be involved and seek to ensure that all health care centres, both private and public, participate in WIL in order generate maximum access to clinical learning areas. Policy may need to be generated to ensure participation.

- Finally, the South African Qualifications Authority as well as registering bodies such as the HPCSA and the South African Nursing Council must monitor WIL in the health professions. These parties need to oversee the qualification and manage the number institutions offering courses in the health sciences with WIL requirements. In doing so they will be able to determine if the requirements set are achievable and adjust them as required. They must better monitor the number of students enrolled in relation to the infrastructure needed to support the number of students in order to ensure WIL is not compromised.

6.1.2. Recommendation 2: Cost-intensity of Participating in CP in the BEMC

Planning for WIL should start before a student enrols and registers for the course. The course is unique and that must be appreciated and communicated during student recruitment on open days as well as on pamphlets and the website. This will help prospective students make an informed decision regarding enrolling for the course. In addition to that the university must formulate strategies that will curb out of pocket expenses to satisfy the CP requirements and reduce the cost of burden of compliance.

- Regarding the cost associated with CP, an ideal solution would be to pay students a stipend, but that would generate challenges in obtaining funds to support such an initiative

- The students need to be informed of the course's activities and the financial burden imposed by these activities. The information needs to be made visible on official platforms to enable students to advise their sponsors and bursaries with regard to any additional cost that accompanies studying the BEMC and CP in particular.

- Complying with CP through FISDAP and completion of online assessment forms was said to be expensive and that CP mentors do not comply. Unfortunately advances in technology warrant the need for FISDAP and all parties involved must comply. As indicated above FISDAP monitors the activities and provides ongoing data on the status of WIL areas and compliance of students with CP. Excluding it from the programme is thus not an option. The practical solution is to fund mobile data either by giving students portable wi-fi devices to ensure access to the internet. The assessment form needs to be evaluated to determine opportunities to make them shorter and concise without compromising quality and the content of the forms.

- Another strategy that may be employed is to seek to determine less cost intensive models of CP. This would require the governing bodies such as the HPCSA and SAQA to be engaged as the CP requirements are prescribed by them.

6.1.3. Recommendation 3: The knowledge of Clinical Mentors of CP

The data revealed that the clinical mentors are not well oriented on the course and that students often have to prove their capabilities to manage patients and perform procedures. This thus limits the students' exposure in CP.

- The university needs to have access to clinical mentors personally and not rely on the company's management to communicate the needs of the university as well as the WIL requirements. This will create opportunities for mentors to interact with instructors and establish relations that enable access between the mentors and the university. The immediate concerns will be raised effectively and addressed as they are raised without having to wait for a managerial sitting or committee meeting.

- The companies need to have measures to evaluate their employees and determine if they are satisfied with their positions and that work demands are achievable. Disgruntled employees do not make good mentors.

6.1.4. Recommendation 4: Perceived Discrimination in CP

Students need to be made aware of strategies that will enable them to identify discrimination and reporting channels for such incidents.

- The induction in CP can sensitize learners to everyday racism, microaggression and any other conduct that serves to marginalize or isolate individuals or groups with or without a particular characteristic. Emphasis must be placed, not on the motive of the alleged perpetrator, but on the social isolation and erosion of self-esteem and dignity experienced by the victim/complainant.

- Mentors, too, should be inducted into the programme and sensitized to the requirement for culturally sensitive communication, microaggression and everyday racism.

- Standard working procedures need to be in place to provide guidance to dealing with discrimination of any kind. All stakeholders and legal advisers need to be involved to ensure the legitimacy of such a document.

6.1.5. Recommendation 5: Perceived Limited Support by the University EMS Department

Debriefing has a number of benefits for mental wellbeing as discussed in *Chapter Five.*

- It is, therefore, recommended that the university's EMS department factors in a debriefing session into their planning to enable the students to share their experiences and reflect on events taking place in CP.

- The department may seek to employ the services of a qualified professional instead of using the departmental clinical instructors as the students suggested.

The students also indicated the need for academic support where they said they needed to be inducted on academic processes and procedures like submission of assignment and using FISDAP for example. They said learning all the processes as they go along may affect them negatively.

- All subject offerings in the university are required to have a learner guide which serves as a road map for that subject. The contents may include subject details, objectives and outcomes of the subject and as well as the assessment criteria for the subject in question. It is, therefore, the responsibility of the students to go through the learner guide to familiarize themselves with the subject as well as note the expectations and implications of the subject.

- Additionally, the university EMS department may actively educate and familiarize students on FISDAP through online tutorials or any other effective platform to ensure students are adequately trained to use the programme. This can form part of orientation which can be readily available as a booklet or an online link.

6.2. RECOMMENDATIONS FOR FUTURE RESEARCH

The research was limited to only one university offering the BEMC course and thus the findings may not be transferable. It is therefore possible that the findings are unique to the university at which the research was done. It is thus my recommendation that future research involves a bigger population encompassing all universities offering the courses, the students and the clinical mentors at the different clinical areas to determine the perceived weaknesses and strengths of CP. Such a study may also afford universities to benchmark off one another where applicable. The findings of that research would be able generate recommendations that would be adoptable by policy makers such as the Department of Health and the Health Professions Council of South Africa.

6.3. CONCLUSION

There is limited literature specific to WIL in the South African BEMC and other courses in the emergency medical care field although there is academic literature on other medical and nursing disciplines (Van Wyk, Heyns and Coetzee, 2015). Moodley (2016) in his study on clinical practicum experience of ALS paramedic students and their preparedness for professional practice found that CP experience was beneficial to ALS paramedics. Van Wyk *et al.*, (2015) did a study on pre-hospital learning environment for an emergency nursing programme. The study also found that having emergency nursing students work in the pre-hospital environment was beneficial to their curriculum and their practice. The findings by Van Wyk *et al.* (2015) indicated that the expertise of pre-hospital emergency care practitioners proved beneficial and that nursing students learnt a lot from them.

The study further revealed that teamwork in the pre-hospital environment affords them the opportunity to learn communication skills they otherwise would not have learnt if they were not in the programme. Working on the road further afforded the nursing students competencies to have a deeper understanding on mechanisms of injuries as well as the paramedic practices. The study by Moodley (2016) found that though the practice was beneficial to students there were challenges that needed to be addressed.

The weaknesses included poor infrastructure to support clinical learning, the inabilities of clinical mentors to teach and the malalignment of the curriculum to CP. This study contributes to the knowledge above.

This research revealed that WIL in the BEMC is perceived as an important part of the course and students benefit from participation in WIL the findings are similar to those of the two studies cited above. The perceived weaknesses were found to be shortages in infrastructure to support WIL, willingness of the clinical mentors to teach, shortages in learner support and discrimination against students and lastly the cost implications of participating in CP. Recommendations have been made to meet the implications provided by the findings. Recommendations for future research include dealing with vicarious traumatisation in mentorship interactions, funding models for sustaining mentorship, employer capacity for work-readiness programmes, student engagement in clinical practice and ethical issues in mentorship arrangements and practice.

REFERENCES

Abery, E., Drummond, C. and Bevan, N. 2015. Work Integrated Learning: What do Students Want? A Qualitative Study of Health Sciences Students' Experiences of Non-competency Based Placement. *Student Success*. 6(2) 87-91.

Al Ramiah, A and Hewstone, M. 2013. Discrimination Conditions, Consequences, and Cures. *The Oxford Handbook of Political Psychology. (2 ed.) Chapter 27. Oxford University Press. 527-542.*

Alshenqueeti, H. 2014. English Linguistic Research. *Interviewing as a Data Collection Method: A Critical Review.* 3 (1): 39-45.

American Psychology Association (APA). 2015. Discrimination. What is and how to cope. Available on https://www.apa.org/helpcenter/discrimination. [Accessed 26/ 04/ 2019].

Anderson, L. 2011. A learning resource for developing effective mentorship in practice. *Midwifery*, *25*(51), 48–57.

Assignment Point. 2016. Mentoring. Advantages and disadvantages of mentoring. Available on https://www.assignmentpoint.com/business/management/advantages-and-disadvantages-of-mentoring.html. [Accessed 23/06/2016]

Bazana, S. & Mogotsi, O.P., 2017, 'Social identities and racial integration in historically white universities: A literature review of the experiences of black students', *Transformation in Higher Education* 2(0).

Barret, C., and Myrick, F. 1998. Job satisfaction in preceptorship and its effect of the clinical performance of the preceptee. *Journa of Advance Nursing*. 27 (2): 364-371.

Billet, S. 2009. Realising the educational worth of integrating work experiences in higher education. *Studies in Higher Education*. 34(7): 827-843

Bola, S., Trollip, E., and Parkinson, F. 2015. The State of South Africa Internships: A National Survey Against HPCS. *South Africa Medical Journal.* 105 (7): 535-539.

Bornan, T., Tan, N., Beshuizen, H,. Gick, R., Isba, R., Mann, K., Scherpbeir, A., Spencer, J., and Timmins, E. 2014. How and What do Medical Students Learn in Clerckships? Experience Based Learning. *Adv in Health Science Education*. 19: 721-749.

Boyle, M., Williams, B., and Burgess. 2007. Contemporary Simulation Education for Undergraduate Paramedic Students. *Emergency Medicine Journal.* 24(12): 854-857.

Braun, V. and Clarke, V. 2006.Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, (3):77-101.

Bringle, R. G., and Hatchet, J. A. 1995. A service-learning curriculum for faculty. *Michigan Journal of Community Service Learning*. 2 (1): 112-122.

Burch, V. C. 2007. Medical Education in South Africa: Assessment Practices in a Developing Country. [Unpublished Doctoral Thesis]. Rotterdam: Erasmus University Rotterdam.

Business Dictionary. 2019. www.businessdictionary.com. [Accessed 21/04/2019].

Burns, C., Beuchesne, M., and Ryan-Krause, P., 2006. Mastering the preceptor role: Challenges of clinical teaching. *Journal of Pediatric Health Care* 20 (3), 172–183.

Cambridge Advanced Learner Dictionary. 2008. 3rd Ed. Cambridge University Press. Cape Town.

Cape Peninsula University of Technology. 2012. Emergency Medical Care III, Learner Guide. EMS Department.

Cape Peninsula University of Technology. 2016. Emergency Medical Care I, Learner Guide. EMS Department.

Carlson, E., Wann-Hansson, A. and Pilhammar, E. 2009. Teaching during clinical practice: Strategies and Techniques Used by Preceptors in Nursing Education. Nursing Today 29: 522-526

Carlson, S., Kotze, D., and van Rooyen. 2003. Accompaniment needs of First year nursing students in the clinical learning environment. *Curationis*. 26(2):30-39.

Cassimjee, R., Cur, M., and Bhengu, M.P. 2006. Student Nurses' Perceptions of their Contact Time with Stakeholders in Clinical Instruction. *Curationis*, 29(4): 47-53.

Chan Z. C. Y., Fung, Y., and Chien, W. 2013. Bracketing in Phenomenology: Only Undertaken in Data Collection and Analysis Process? *The Qualitative Report*, 18 (59): 1-9.

Cilesiz, S. 2010. A Phenomenological Approach to Experiences with Technology: Current State, Promise and Future Directions for Research. *Education Tech Research Dev*elopment, (59): 487-510.

Cilliers, R. and Smit, P. 2014. A Comparison Between the Management Models of WIL for the Interior Design Qualification in Universities abroad and the Universities in South Africa. *African Journal for Work-Based Learning*, 2 (2) 31-41

Close Commute Systems Inc. 2018. The effects of long commutes and what to do about them. *An Annotated bibliography*. Version 12

Clynes, M. P., and Raftery, S. E. C. 2008. Feedback: an essential element of student learning in clinical practice. *Nurse Education in Practice*. *8*(6):405–11.

Cohut, M. 2018. What are the health benefits of being social? *Medical News Today*. Healthline media UK Ltd, Brighton.

Coll, R.K., Eames, C., Paku, L., Lay, M., Hodges, D., Bhat, R., Ram, S., Ayling, D., Fleming, J., Perkins, L., and Wiersma, M.A. 2009. An Exploration of the pedagogies employed to Integrate Knowledge in work integrated learning, *Journal of Cooperative education and internships*, 43(1): 14-35.

Conradi, E, Kavia, S., Burden, D., Rice, A., Woodham, L., Beaumont, C., Savin-Baden M. and Poulton, T. 2009. Wirtual Patients in a Virtual World: Training Paramedic Students for Practice. *Medical Teacher*. 31: 713-720.

Council on Higher Education. 2007.

Council on Higher Education (CHE). 2011a. Directorate: Standards Development. A Framework for Qualifications Standards in Higher Education.

Council on Higher Education. 2011b. Work Integrated Learning: Good Practice Guide. *HE Monitor No 12*. Pretoria.

Council on Higher Educatio. 2011c. Higher Education Qualifications Sub-Framework. 2013. Council on Higher Education. Available on: https://www.che.ac.za/focus_areas/higher_education_qualification_sub_framework/overview . [Accessed 19/06/2016]

Cresswell, J.W. 2007. *Qualitative Inquiry and Research and Design: Choosing Among Five Approaches*. (2nd ed.) Sage Publications. Thousand Oaks.

Cullen, M. 2007. The Role of Cooperative Education in Developing Environmental sciences skills. Asian Pacific Journal of Cooperative Education. 8(1) 37-52.

Dennen, V.P. 2004. *Cognitive Apprenticeships in Education Practice: Research on scaffolding, modelling, Mentoring and coaching as Instructional Strategies*. Cognitive Apprenticeship in Educational Practice. 31: 813-828.

De Vos, A. S., Strydom. H., Fouche, C. B., and Delport, C. S L., 2011. *Research at grass roots for the social sciences and human service professions.* (4th ed.) Hatfield, Pretoria: Van Schaik.

Department of Health, South Africa. 2017. National Emergency Care Education and Training Policy (NECET). Pretoria: Government Printer.

Docquier, F. 2014. *The brain drain from developing countries: The brain drain produces many more losers than winners in developing countries*. World of Labour.

Docquier, F., Olivier, L.,and Marfouk, A. 2007. Brain drain in Developing Countries. *The World Bank Economic Review.*

Emergency Care Society of South Africa. 2012. *Position Statement on the Health Professions Council of South Africa's Intention to Close the Short Course-Related Professional Registers.* Available on www.ecsaa.org.za [Accessed 08/08/2016].

Essed, P. 1991. *Understanding Everyday Racism: An Interdisciplinary Theory*. Sage Publications. London. New Delhi.

Erasmus, N. 2012. Issues in Medicine: Slaves of the State- Medical Internship and Community Service in South Africa. *South African Medical Journal,* 102 (8) 655-658.

Eby, L.T., and Lockwood, A. 2005. Protégés' and mentors'reactions to participating in formal mentoring programs: A qualitative investigation. *Journal of Vocational Behaviour*. 67: 441-458.

Eddy, E., Tannenbaum, S., Alliger, G., D'Abate, C., and Givens, S. 2001. *Mentoring in industry: The top 10 issues when building and supporting a mentoring program.* Technical report prepared for the Naval Air Warfare Training Systems Divisions.

Evans, S., C. 2005. Positive and Negative Mentoring Experiences Impact on Protégé Outcomes. University of Georgia.

Flinders University. Benefits of Work Integrated Learning. Available on www.flinders.edu.au/teaching/teaching-strategies/W-I-L/benefitsofW-I-L.cfm [Accessed 21/08/2016].

Floyd, A., and Arthur, L. 2012. Researching from within: External and Internal Ethical engagement. *International Journal of Research and Methods in Education*. 35. 1-10.

Freeman, L. and Stewart, H. 2018. *Microaggressions in Clinical Medicine.* Kennedy Institute Ethics Journal. 28(4):411-449.

Ganesh, A., Bozas, A., Subbon, M. and Munapo, E. 2015. The Benefits of Mentoring and Coaching in the Public Sector. Journal of Gorvenance and Regulation. 4(3): 16-29.
Garcia-Jordan, M. Bhat, V. G. Blanco Blanco, E. and Kwizeza, E. 2011.Student perceptions of the integrated PBL MBCHB-III program curriculum in a medical University. *Canadian Medical Education Journal*. 2(1): e29-e31.

Govender, C. and Wait, Marius. 2017. Work integrated learning benefits for student career prospects mixed mode analysis. *South African Journal of Higher Education*. 31 (10):31-35.

Govender, C. M. and Wait, M. 2017. Work integrated learning benefits for student career prospects - mixed mode analysis. South African Journal of Higher Education, 31 (5) 49-46

Groenewald, T. 2004. A Phenomenological Research Design Illustrated. *International Journal of Qualitative Methods,* 3(1).

Grogan, P., Eviner, V. and Hobbie, S. 2013. *The Qualities and Impacts of a Great Mentor and How to Improve Mentoring.* Bulletin of the Ecological Society of America.

Guba, E., G. 1981. Criteria for Assessing the Trustworthiness of Naturalistic *Inquiries. Educational Communication and Technology*. 29(2): 75-91.

Gwavu, Z. 2016. Interview with the Researcher. Pretoria.

Haddara, M. and Skates, H. 2007. A Reflection on Cooperative education: From Experience to Experiential Learning. *Asian Pacific journal of Cooperative education*. 8(1): 61-67.

Harden R.M., and Crosby J.R. 2000. AMEE Guide No 20: The Good Teacher is more than a Lecturer: The Twelve Rules of the Teacher. Med Teach 22: 334-347.

Hamel, J., Dufour, S. and Fortin, D. 1993. *Case Study Methods*. Newbury Park. CA: Sage.

Hammig, O., Gutzwiller, F., and Bauer, G. 2009. Work-life Conflict and Associations with work and non-work-related factors and with physical and mental health outcomes: A nationally representative cross-sectional study in Switzerland. *BMC Public Health*. 9(1): 435

Health Professions Council of South Africa (HPCSA). Professional Board for Emergency Care. 2011. *Guidelines for the Completion of the Portfolio for Institutions Wishing to Offer the ECT and ECP Programmes.* Form 332. 5-8.

Henderson, A., Briggs, J., Schoonbeek, S., Paterson, K., 2011. A framework to develop a clinical learning culture in health facilities: ideas from the literature. *International Nursing Review* 58(2): 196-202

Higher Education Qualifications Sub-Framework. 2013. Council on Higher Education. Available on: https://www.che.ac.za/focus_areas/higher_education_qualification_sub_framework/overview. [Accessed 19/06/2016]

Hou, X. A., Rego, J. and Service, M. 2013. Review Article: Paramedic education opportunities and challenges in Australia. *Emergency Medicine in Australasia*. 25: 114-119.

Jacobs, H. S. 2015. A Strategy to Optimise the Contribution of Work Integrated Learning Towards the Employability of Students of The Central University of Technology, Free State. DTech thesis. Unpublished

Jacobson, S.H., King, D.H., Yuan, R. 2011. A note on the relationship between obesity and driving. *Journal of transport Policy*. 1-5. Available on http://www.ahtd.info/yahoo_site_admin/asserts/docs/A_note_on_the_relationship_between_obesity_and_driving.173153035.pdf. [Accessed 04/05/2018]

Kaider, F., Hains-Wesson, R and Young, K. 2017. Practical typology of authentic work-integrated learning activities and assessments. *Asia-Pacific Journal of Cooperative* Education, Special Issue, 2017, 18(2), 153-165

Khoza, T.L. 2016. Interview with the Researcher. Pretoria.

Kolb, A. Y., and Kolb, D. A. 2005. Learning Styles and Learning Spaces: Enhancing Experiential Learning in Higher Education. *Academy of Management Learning and Education* 4 (2): 193-212.

Kramer, M., and Usher, A. 2011. *Work Integrated Learning and Career-Ready Students: Examining the Evidence Toronto: Higher Education Strategy Associates*.

Kuh, G. D. (2009). The national survey of student engagement: Conceptual and empirical foundations. *New Directions for Institutional Research 2009* (141), 5–20.

Kubirske, I. 2014. Ambulance Courses: The long and Short of it. 32-35. Available on www.fireonline.co.za. [Accessed 25 July 2017].

Leedy, P.D, and Ormrod, J.E. 2001. *Practical Research: Planning and Design.* Upper Saddle River; New Jersey. 101-105.

Lekhuleni, E.M., Van der Wal, D.M. and Ehlers, V. J. 2004. Perceptions Regarding the Clinical Accompaniment of Student Nurses in Limpopo Province. Health *Gesondheid*, 9(3): 15-17.

Lerman, R. 2014. Do firms benefit from Apprenticeship Investments? Why spending money of occupational skills can yield economic returns to employers. American university. Germany.

Lewis, M., Holtzhausen, N., and Taylor, S. 2010. The dilemma of Work Integrated Learning (WIL) in South Africa Higher Education: The case on Town and Regional Planning at the University of Johannesburg. Town and Region Planning. 57: 25-36.

Lincoln, Y. S., and Guba, E. G. 1985. Naturalistic Inquiry. Beverly Hill, California: Sage

Luescher-Mamashela, T. M. 2013. Governance of Higher education in South Africa. *Leadership and Governance in Higher Education*. 1:90-109.

MacFarlen C., van Loggerenberg C., Kloeck W. 2005. International EMS systems: South Africa-Past, Present and Future. *Resuscitation*. 64: 145-148.

Mackaway, J. and Winchester-Seeto, L. 2018. Human resource professionals as WIL gatekeepers. *International Journal of Work-integrated Learning*. 19(2): 141-145

Mackie, D., M. and Smith, E., R. 2002. Beyond prejudice: Moving from positive and negative evaluations to differentiated reactions to social group. In D.M. Mackie & E.R. Smith (Eds), *From prejudice to intergroup emotions: Differentiated reactions to social groups* (pp 1-12) New York: Psychology Press.

Magobe, B.D., Beukes, S. and Muller, A. 2010. Reasons for students' poor clinical competencies in Primary Health Care: Clinical Nursing, Diagnosis Treatment and Care Programme. Health SA. *Gesonheid* (Online), 15(1): 1-6.

Martin, A. and Hughes, H. 2009. *How to Make the Most of Work Integrated Learning: A Guide for Students, Lecturer and Supervisors*. Massey University. Palmerstone North.

McClure, J. 2011. Components of an Effective Online Pre-course Orientation for Supplemental Online Students. University of Minnesota.

McMillan, J. H., and Schumacher, S. 2010. *Research in Education: Evidence-Based Inquiry*. Pearson.

Medical Council of New Zealand. 2004. *Cooperative learning*. Available on www.mcnz.org.nz. [Accessed 14/07/2016].

Merriam, S.B. 2002. *Introduction to Qualitative Research*. San Francisco: California.

Meyer, M. 2000. Qualitative Research and the Generalizability Question: Standing Firm with Proteus. *The Qualitative Report*, 3(4). Available on www.nova.edu. [Accessed 10/09/2016].

Mochaki, N.W. 2001. Clinical Teaching by Registered Nurses. Unpublished M.A. Dissertation. University of South Africa: Pretoria

Moodley, K. 2016. An investigation into the clinical practicum experience of ALS paramedic students and their preparedness for professional practice. Unpublished Master's thesis, Durban University of Technology.

Mtambo, S. 2009. Student Nurses experiences of Clinical Accompaniment in Public Hospitals in Gauteng Province. Unpublished M.A. Dissertation. University of South Africa: Pretoria.

Navera, G. S. 2018. The technicist framework of English language education and the teaching of speech in the Philippines. Reconceptualizing English Education in a Multilingual Society. Springer

Nkabinde, T. C., Ross, A., Reid, S and Nkwanyana, N. M. 2013. Internship Training Adequately Prepares South African Medical Graduates for Community Service-With Exceptions. *South African Medical Journal*, 103(12): 930-934.

Noble, H., and Smith, J. 2013. Evidence Based Nursing: *Issues of Validity in Qualitative Research.* 18(2). Available on http://ebn.bmj.com [Accessed 23/07/2016].

Ojaha, M. 2010 Support for Learning in the clinical area; experiences of post registration student midwives. AISHE-J (Online), 2(1): 14.3.

Oliver, B. 2015. Redefining Graduate Employability and Work-Integrated Learning: Proposals for Effective Higher Education in Disrupted Economies. *Journal of Teaching and Learning for Graduate Employability*. 6 (1): 56-65

Opdenakker, R. 2006. Forum: Advantages and Disadvantages of Four Interview Techniques in Qualitative Research. *Qualitative Social Research,* 7(4).

O'Shear, A. 2014. Models of WIL. In S. Ferns (ed.), Work integrated learning in the curriculum. *Higher Education Research and Development Society of Australia guide.* Australian Collaboration Education Network Ltd.

Padilla-Diaz M. 2015. Phenomenology in Educational Qualitative Research: Philosophy as Science or Philosophical Science. *International Journal of Education Excellence*, 2(1): 101-110.

Patton, M.Q. 1990. Qualitative evaluation and research methods. 2nd Ed. Sage Publictions, Inc. CA.

Patrick, C.J., Peach, D., Webb, F., Fletcher, M., and Pretto, G. 2008. The WIL (Work Integrated Learning) report: A national scoping study. Brisbae, Australia learning and teaching council final report. Available on http://www.olt.gov.au/project-work-integrated learning-wil-2007. [Accessed 13/06/2016].

Philips-Jones, L. 2003. Skills for successful mentoring. The new Mentors and proteges.

Ramani, S. and Leinster, S. 2008. AMEE Guide no. 34: Teaching in the clinical environment. *Medical Teacher*. 30: 347-364.

Republic of South Africa. 2005. The Nursing Act (Act 33 of 2005). Pretoria: Government Printer.

Republic of South Africa. The Constitution of the Republic of South Africa. Act No 106 of 1996. Pretoria: Government Printer.

Ritchie, J. and Lewis, J. 2003. Qualitative Research Practice: A guide for social science students and researchers. Sage Publications, London: Thousand Oaks.

Ross, A. 2010. Nutrition and its Effects on Academic Performance. How can our Schools Improve? Northern Michigan University.

Rossman, G. B., and Rallis, S. F. 1998.Learning in the field: An introduction to qualitative research. Thousand Oaks, CA: Sage Publications.

Samadi, F. R. 2015. Assessing the impact of work integrated learning and its practices on the education of engineering technicians and technologists in relation to the Higher Education Qualification Sub-Framework (HEQSF) document in South Africa. University of South Africa [PHD thesis].

Sandow, E. 2011. On the road; Social Aspects of Commuting Long Distances to Work. Department of Social and Economic geography. GERUM; Umea.

Savin-Baden, M. and Major C. 2013. Qualitative Research: *The Essential Guide to Theory and Practice*. London: Routledge.

Schneider, R.C., and Stier, W.F. (2006). Sports management field experiences as experiential learning: Ensuring beneficial outcomes and preventing exploitation. *The Sports Management and Related Topics Journal*. 2 (2): 36-39

Sharif, F. and Masoumi, S. 2005. A Qualitative Study of Nursing Student Experiences of Clinical Practice. *BMC Nursing* 2005 (Online), 4(6). Available on http://craetivecommons.org/licencesby2.0 [Accessed 06/09/2016].

Shenton, A., K. 2004. Strategies for Ensuring Trustworthiness in Qualitative Research Projects. Education for Information. 22: 63-75. Available on https://doi/10.3233/EFI-2004-22201. [Accessed 06/09/2016]

Sibiya, N.E. 2012. Work Integrated Learning Experiences of Primary Health Care Post Basic students in Clinical Settings. Unpublished Master of Technology Dissertation. Durban University of Technology. Durban.

Smith, A. 2000. The theory of moral sentiments. Amherst, NY: Prometheus Books.

Smith, J.A. 2007. Hermeneutics, Human Sciences and Health: Linking Theory and Practice. International *Journal of qualitative Studies on Health and Well-being*. 1 (2): 3-11.

Smith, R., and Betts, M. 2000. Learning as Partners: Realising the Potential of Work-based Learning. *Journal of Vocational education and Training*. 52 (4): 589-604.

South African Board for Peoples Practice. 2014a. Fact Sheet: Work Integrated Learning. - Available on http://sabpp.co.za-fact-sheet. [Accessed 06/09/2016]

South African Board for Peoples Practice. 2014b. Professional Guideline: Internship Guide for Employers. Available on http://sabpp.co.za-professional-guideline. [Accessed 09/02/2019]

South African Council on Higher Education (CHE). 2011_a. Discussion Document on the HEQF Review.

South African Qualifications Authority. Available on allqs.saqa.org.za/showQualification.php?id+63129. [Accessed 25 July 2017].

Spencer, J. 2003.ABC of Learning and Teaching in Medicine: Learning and Teaching in the Clinical Environment. *British journal of Medicine*. 326(7389) 591-594

Steinert, Y. 2005. Staff Development for Clinical Teachers. Clin Teach. 2: 104-110.

Stirling, A., Gretchen, K., Banwell, J., MacPherson, E. and Heron, A. 2016. A Practical Guide for WIL: Effective Practices to Enhance the Educational Quality of Structured Work Experiences Offered Through Colleges and Universities. Higher Education Council of Ontario.

Taylor T. 2014. *Paramedics race for four-year training.* Available on www.iol.co.za [Accessed 10 June 2016].

TenHouten, W. D. 2018 From ressentiment to resentment as a tertiary emotion. *Canadian Center of Science and Education*. 10(4)

Thomas, L. (2002). Student retention in higher education: the role of institutional habitus. *Journal of Educational Policy*, *17*(4), 423–442.

UNICEF. 2016. The impact of language policy and practice on children's learning: Evidence from Eastern and Southern Africa. South Africa.

UNICEF. 2015. Debrief. Capturing Insights from Fields Missions and Assignments. United States of America, New York.

University of Johannesburg. 2017. Work Integrated Learning and Service Learning Policy.
University of Leicester. *Mentoring at the University of Leicester.* Available on http://www2.le.ac.uk/offices/red/rd/career-development/research-staff/mentoring. [Accessed 01/05/2016]

Van Huyssteen, N. 2016. A legal analysis of the emergency medical services in South African. Unpublished Magister Legum Thesis. University of Pretoria. Pretoria.

Van Wyk, S., Heyns, T. and Coetzee, I. 2015. The value of the pre-hospital learning environment as part of the emergency nursing programme. Health SA Gesondheid, 20 (1): 91-99.

Webb, V., N. 2002. *Language development policy in South Africa*. World Congress of Language Policies. Barcelona. [Conference Paper].

Wessels M. 2014. Cooperate Education at the Tshwane University of Technology: A New Direction for Work Integrated Learning and Employability. *African Journal for Work-Based Learning*, 2 (2): 1-16.

Waxman, A. and Williams, B. 2006. Paramedic Pre-employment Education and Concerns of Our Future: What are Our Expectations? *Journal of Emergency primary Health Care*. 4(4): 394-

Wong, A. T. and Premakumar, K. 2007. An Introduction to Mentoring Principles and Strategies for Facilitating Mentoring Relationships at a Distance. Available on http://www.usak.ca/gmcte/drupal/?=resources

Yin, R. 1994. *Case Study Research, Design and Method*. 2nd Ed. Beverly Hills. CA: Sage.

Yuksel, P. and Yildirim, S. 2015. Theoretical Frameworks, Methods, and Procedures for Conducting Phenomenological Studies in Educational Settings. *Turkish Online Journal of Qualitative Inquiry*, 6(1):1-20.

APPENDIX A
PARTICIPANT INFORMATION AND CONSENT FORM

My name is Mashadi Maureen Baloyi and I am currently registered with the Cape Peninsula University of Technology for a Master's in Emergency Medical Care. I'm currently doing a study on the Clinical Practice subject in Emergency Medical Care training particularly on the Bachelor in Emergency Medical Care at a South African University of Technology.

The research aims to identify the perceived strengths and perceived weaknesses of the Clinical Practice Subject of work integrated learning in the BEMC programme. Findings of the research may be used to inform future Clinical Practice subject offerings at Universities of Technology in South Africa in order to provide optimal learning opportunities for students.

Participation in this study implies that you will be required to participate in a semi-structured one on one, face to face interview. The interview will be tape recorded and only the researcher and her supervisors will have access to the recordings.
This interview (if you choose to participate) will not be used as an assessment tool and it will not be graded, nor will it be used in any performance appraisals. Names will not be used and confidentiality is guaranteed as you will be assigned a participant number. You will be allowed to withdraw from the study at any point of the study if you do not want to continue with the study without any penalties. The interview is set to be thirty minutes long. Findings of the research will be made available to you after the researcher is completed, via the CPUT Library Archives and from the CPUT Department of EMC if the relevant processes are adhered to. Additionally the findings will be available directly from the researcher.

In an event where the researcher believes that you the participant are in an emotional state and cannot continue to proceed with the interview. The researcher will stop the interview immediately and refer you to the students counselling centre for assistance.
For further information please feel free to contact me the researcher or the supervisor on the following contacts:

Miss M.M Mabuza (researcher)
071 869 9339
ofentsemaureen@gmail.com

Dr B.T. Millar (supervisor)
021 959 6509
millarb@cput.ac.za

CONSENT FORM

If you wish to take part in the research conducted by Mashadi Maureen Mabuza, entitled **"Perceptions of Clinical Practice experiences in the Bachelor of Emergency Medical Care at a South African University please complete** the form below.

I...(Name) voluntarily agree to take part in this survey entitled **"***Perceptions of Clinical Practice experience in the Bachelor of Emergency Medical Care at a South African University of Technology".*

The study has been explained to me and I have had the opportunity to ask questions related to the study. I agree to have the interview tape recorded. I understand the implications that come with participating in this study. I was advised that I am free to withdraw from participating in the study at any point of the study without suffering any penalties.

The study has been approved by the EMC Department of the Cape Peninsula University of Technology as well as the Faculty Research Ethics Committee. Should I suffer any adverse effects during the interview I will be referred to the University counselling centre.

Signature.................................Date..................................

For further information please feel free to contact me the researcher or the supervisor on the following contacts:

Miss M.M Mabuza (researcher)
071 869 9339
ofentsemaureen@gmail.com

Dr B.T. Millar (supervisor)
021 959 6509
millarb@cput.ac.za

WITHDRAWAL FORM

If you wish to withdraw from the research conducted by Mashadi Maureen Mabuza, entitled **"Perceptions of Clinical Practice experience in the Bachelor of Emergency Medical Care at a South African University"** please complete the form below.

I...(Name) wish to withdraw from taking part in this survey entitled **"***Perceptions of Clinical Practice experience in the Bachelor of Emergency Medical Care at a South African University".*

The study has been explained to me and I have had the opportunity to ask questions related to the study. I agreed to have the interview tape recorded. I understood the implications that come with participating in this study. I was advised that I was free to withdraw from participating in the study at any point of the study without suffering any penalties.

The study has been approved by the EMC Department of the Cape Peninsula University of Technology as well as the Faculty Research Ethics Committee. Should I suffer any adverse effects during the interview I will be referred to the counselling centre. Due to reasons that I do not wish to discuss I would like to withdraw.

Signature.................................Date...................................

APPENDIX B
SEMI-STRUCTURED INTERVIEW GUIDE FOR SENIOR STUDENT PARTICIPANTS

1. How is your shift structured?
2. What do you perceive as the strengths of the Clinical Practice Subject?
3. What do you perceive as the weaknesses of the Clinical Practice Subject?
4. Do you believe there are changes that need be with regards to how the Clinical Practice Subject is being conducted?

APPENDIX C
SEMI-STRUCTURED INTERVIEW GUIDE FOR LECTURER PARTICIPANTS

1. What do you perceive the Clinical Practice subject objectives to be?
2. Do you believe the current method in which Clinical Practice is conducted optimally meets its objectives?
3. What aspect of the Clinical Practice subject is important for students to grasp, in your opinion as the CP lecturers?
4. What do you perceive as the weaknesses of the Clinical Practice Subject?
5. What do you believe needs to change with regard to the Clinical Practice subject?

APPENDIX E-

ETHICS APPROVAL

HEALTH AND WELLNESS SCIENCES RESEARCH ETHICS COMMITTEE (HW-REC)
Registration Number NHREC: REC- 230408-014

P.O. Box 1906 • Bellville 7535 South Africa
Symphony Road Bellville 7535
Tel: +27 21 959 6917
Email: sethn@cput.ac.za

11 September 2019
REC Approval Reference No:
CPUT/HW-REC 2016/H29 (renewal)

Faculty of Health and Wellness Sciences – Emergency Medical Science

Dear Ms Mashadi Maureen Mabuza

Re: APPLICATION TO THE HW-REC FOR ETHICS RENEWAL

Approval was granted by the Health and Wellness Sciences-REC on 15 September 2016 to Ms Mabuza for ethical clearance. This approval is for research activities related to student research in the Department of Emergency Medical Science at this Institution.

TITLE: Perceptions of Clinical Practice experience in the Bachelor of Emergency Care at a South African University of Technology

Supervisor: Dr BT Millar
Co-Supervisor: Dr N Naidoo

Comment:

Data collection permission is required and has been obtained.

Approval will not extend beyond 12 September 2020. An extension should be applied for 6 weeks before this expiry date should data collection and use/analysis of data, information and/or samples for this study continue beyond this date.

The investigator(s) should understand the ethical conditions under which they are authorized to carry out this study and they should be compliant to these conditions. It is required that the investigator(s) complete an **annual progress report** that should be submitted to the HWS-REC in December of that particular year, for the HWS-REC to be kept informed of the progress and of any problems you may have encountered.

Kind Regards

Dr Marilize Le Roes-Hill
Deputy Chairperson – Research Ethics Committee
Faculty of Health and Wellness Sciences

APPENDIX F

INIVITATION TO PARTICIPATE IN RESEARCH

☆ LET'S TALK ☆

My name is Maureen Mabuza and I am currently doing my masters in EMC. I am doing research on the Work in Learning in Clinical Practice. The topic of my research is **"Perceptions of Clinical Practice experience in the Bachelor of Emergency Medical Care at a South African University of Technology"**

THE AIM

The research project intends to identify perceptions of lecturers and students on the strengths and weaknesses of the Clinical Practice subject, with a view to informing the development of recommendations to improve learning through the subject offering

Senior (3rd and 4th) EMC students are invited to come have a chat with me about **WIL** and **Clinical Practice** . The chats are one on one face to face interview between me (the researcher) and you (the participant).

Take Note Should you choose to participate **YOU** are required to give written consent. All conversations are completely confidential.

Between 08:00 till 16:00 over 09 till 13 April 2018 at your most convenient.

VENUE

CPUT BELLVILLE CAMPUS EMC BUILDING ***EXACT ROOM NUMBER TO BE CONFIRMED***

CAN'T WAIT TO SEE YOU

For enquiries: Ms M.M. Mabuza 071 869 9339

Scanned by CamScanner