

**INTEGRATING EMERGENCY CARE INTO THE MBChB,  
PROBLEM-BASED LEARNING CURRICULUM AT THE  
NELSON R MANDELA SCHOOL OF MEDICINE,  
UNIVERSITY OF KWAZULU-NATAL:  
*STUDENT AND STAFF PERCEPTIONS***

**A RESEARCH PROJECT**

*submitted in partial fulfilment of the requirements for the degree of Master of  
Education (Higher Education)*

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## DECLARATION

**This dissertation, except where otherwise specifically indicated, is entirely my own original work.**

  
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S Reddy

## DEDICATION

**To my mother-in-law and my late mother:**

*You have been the inspiration, strength and support that has enabled me to reach this milestone in my career. Without the two of you, this research study would not have been possible. I thank you sincerely for all the love and guidance you have given me throughout my life. May God bless the two kindest souls I have known.*

## **ABSTRACT**

### **TITLE**

**Integrating Emergency Care into the MBChB, Problem-based learning Curriculum at the Nelson R Mandela School of Medicine, University of KwaZulu-Natal: Student and staff perceptions**

### **CONTEXT**

The aim of the Emergency Care Practitioner (Basic), ECP (B), Course enables students to acquire knowledge and skills in basic life support, obtain a certificate and register with the Health Professions Council of South Africa as an Emergency Care Practitioner. The ECP (B) Course became a compulsory component of the Curriculum in 1996. During 1996 to 1999, the Course was conducted by Ambulance and Emergency Services – College of Emergency Care. In January 1999, the researcher was appointed to the Nelson R Mandela School of Medicine and integrated the Course into the Traditional Curriculum. The Course was run as a three-week stand-alone module in the traditional didactic format. In 2001, a Problem-based learning Curriculum was introduced into which the ECP (B) Course was integrated. The Course was thus integrated into the entire first year of the Curriculum in the PBL format.

### **OBJECTIVES**

Since the Course was taught in both the Traditional and PBL Curricula, the study was aimed at exploring the impact of the ECP (B) Course on both categories of students' ability. In the Traditional Curriculum, the Course was taught in the first year of study, although the students were only exposed to clinical practice in their fourth year. With the PBL students, the ECP (B) Course runs through their first year, they are also taught clinical skills during their first and second year in the Skills Lab by the Lab-based Clinical Tutors. During their third year, they undertake a Clinical Methods Course that exposed them to patient care in the Wards. This is supervised by

Registrars and Consultants – Ward Tutors. The study also explored the perceptions of both the Skills Lab Tutors and the Ward Tutors regarding the impact of the ECP (B) Course on the students' clinical ability.

## **DESIGN**

The study involved students and staff presently working with the MBChB Curriculum at the Nelson R Mandela School of Medicine. The subjects were selected from a convenience sample as follows:

- 30 3<sup>rd</sup> year students in the PBL Curriculum
- 30 5<sup>th</sup> year students in the Traditional Curriculum
- 5 Clinical Skills Tutors in the Skills Lab
- 5 Clinical Tutors at King Edward Hospital

A questionnaire containing both a rating scale and open-ended questions was designed. The purpose of the questionnaire was to ascertain whether the students were able to perform the various emergency skills in the Lab (pre-clinical) setting and then to ascertain whether they were able to perform these emergency skills on real patients in the clinical situation. It was also used to determine the answer to the first key question of the study:

*What are the Traditional versus PBL students' perceptions on the role of the ECP (B) Course in the MBChB Curriculum and its effects on their clinical ability?*

Semi-structured interviews were conducted with the Clinical Tutors. These interviews were conducted individually lasting 30 minutes. All the interviewees were posed the same questions according to an interview schedule. The purpose of the interviews was to answer the second key question of the study:

*What are the staffs' perceptions on the role of the ECP (B) Course in the MBChB Curriculum and its effects on the clinical abilities of the Traditional students versus that of the PBL students?*

## **MAIN OUTCOMES**

Both groups of students felt that the ECP (B) Course was a rewarding learning experience. In general, most of the skills were learnt during the Course on models

and/ or simulated patients by both the 3<sup>rd</sup> and 5<sup>th</sup> year students, except for the simulated foetal and placental delivery. The 3<sup>rd</sup> years have not been exposed sufficiently to real patients and were thus not given the opportunity of performing all the skills learnt during the ECP (B) Course on real patients in the clinical setting whereas all the skills except for CPR on an adult and infant patient have been performed by the 5<sup>th</sup> years on real patients. Both groups of students were satisfied with the Tutor's ability to teach the ECP (B) Course in both the PBL and Traditional formats.

Both the Lab and Ward Tutors were familiar with the ECP (B) Course. They were of the opinion that the skills were relevant and extremely beneficial to all medical students. They said that the skills training had a positive impact on the students' clinical ability. It gave them confidence to deal with real patients and competence with the procedures and the relevant equipment. The Tutors were able to differentiate between the PBL students and the Traditional students' clinical ability to perform skills both in the simulated and real environments. The 5<sup>th</sup> years lacked the confidence and approach that the 3<sup>rd</sup> years had achieved with the models and patients. They expressed a concern that some basic sciences should be taught before clinical skills training and there should not be too long a delay between when the skills are taught in the Lab, to when the students are placed in the real situation. Finally, all interviewees felt that the ECP (B) Course should be a compulsory first year module.

## **CONCLUSION**

The evidence collected from the research tools was insufficient to conclusively find a marked difference in the learning of the Traditional versus PBL students. The Lab Tutors and the Ward Tutors were, however, able to differentiate between the two groups of students based on their clinical skills ability. The students in the Traditional Curriculum, although being able to perform the clinical skills on real patients, seemed less confident and did not have a structured approach to patient care, whereas the PBL students seemed very confident and had a systematic approach to patient care. These differences may be attributed to the teaching and learning styles of the students and Tutors involved.

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***THANK YOU GOD, FOR GIVING ME THE STRENGTH AND COURAGE TO PERSEVERE.***

## **CHAPTER 1 – INTRODUCTION**

### **1.1 BACKGROUND**

**As the Manager of the Skills Resource Facility at the Nelson R Mandela School of Medicine, it is the responsibility of the researcher to teach the Emergency Care Practitioner (Basic) Course to the first year medical students. The ECP (B) Course became a compulsory component of the first year MBChB Curriculum since 1996. Details of the ECP (B) Course are as follows:**

#### **1.1.1. COURSE AIM**

**To enable students to acquire knowledge and skills in basic life support, obtain the course certificate on successful completion of the examination and to register with the Health Professions Council of South Africa as an Emergency Care Practitioner.**

#### **1.1.2. COURSE OBJECTIVES**

- To render basic life support to the sick or injured. To develop the cognitive levels of knowledge and understanding concerning the type and recognition of emergency care situations in South Africa.**
- To develop the psychomotor skills that are necessary to treat patients in the emergency care situations by using and applying emergency care equipment and material.**

#### **1.1.3. THE ECP (B) COURSE OFFERED IN THE TRADITIONAL CURRICULUM (1996-2001) Table 1, Page 4**

**During the period 1996 to the year 1999, the ECP (B) Course was co-ordinated and run by the College of Emergency Care. Ambulance and Emergency Medical**

Services. The medical students went over to this Institution in groups of 50 to be taught the course which was conducted over a three-week period in the Traditional didactic format. Since it is not University policy to have outside Institutions accrediting its courses, it was decided that the Faculty of Health Sciences, Medical School would employ its own Emergency Care Practitioner who would be responsible for the co-ordination and tutoring of the ECP (B) Course to the medical students. Thus, in January 1999, the researcher was appointed to the post of Manager of the Skills Lab/Emergency Care Co-Ordinator. The researcher was allocated a room on the 5<sup>th</sup> floor of the Medical School and was tasked with establishing a Skills Lab. She immediately set about purchasing the necessary equipment. Being the only staff member with an Emergency Care qualification, the researcher had to single-handedly teach the ECP (B) Course to the medical students in the didactic method that was being implemented in the Traditional Curriculum at that time. Due to the limited equipment, space and staff, the course had to be run in groups of fifty students at a time. The busy academic year also posed timetabling problems. The students were only available to do the course during their vacation periods. One course was therefore run during the Easter vacation, and the other three courses during the mid-year vacation. The course had to be structured into three, six-day weeks. Lectures began at 08h00 and finished at 17h00 everyday. This led to the course being extremely intense due to the long hours and the short time frame that was allocated to the course, i.e. 3 weeks only. The theoretical component of the course was covered by didactic lectures to fifty students at a time. The practical demonstrations were also conducted using these large groups. The total number of students in the class was 200.

#### 1.1.4. THE ECP (B) COURSE OFFERED IN CURRICULUM 2001 (PBL CURRICULUM) (2001 to present date) Table 1, Page 4

Soon after the researcher's appointment at the Medical School, Curriculum reform began in earnest. The Traditional Curriculum was being changed to a PBL

**Curriculum. A Curriculum Development Task Force (CDTF) was established to steer this process forward. The researcher was given the opportunity of becoming an active member of the CDTF and began working on integrating the ECP (B) Course into the PBL Curriculum. Upon structuring the integration of the course into the PBL Curriculum, she identified the need for more staff, equipment and space, in order to facilitate the small group learning that was required of the PBL Curriculum. More staff was needed so that the Tutor:student ratio would be 1:10, four identical sets of equipment needed to be purchased so that it could be accessible to all four groups simultaneously, and a large enough room was needed so that the four groups of ten students would be accommodated in the Lab. Motivations in this regard were submitted to the Faculty. In January 2001, an assistant, Mrs N Houston was appointed to the post of Assistant Manager: Skills Lab. Subsequently, two Clinical Tutors were also appointed. The Skills Laboratory was refurbished and a larger space was created on the second floor of the Medical School. A budget, for the purchasing of models, mannequins and equipment was also granted. This made it possible to run the course through the entire year in the PBL format.**

**The first group of students registered for the new PBL Curriculum in January 2001. With the inception of the new PBL Curriculum came the introduction of a laboratory based Clinical Skills Training Programme. The first year of study is organised in Themes. Themes are six-week periods in which broad concepts or complaints are topic of study, such as Diabetes. Guided by a Theme book, the students acquire the relevant knowledge. As much as possible, the clinical skills training in these Themes are largely relevant to the clinical skills of the Theme. In the Diabetes Theme, for example, the relevant clinical skills are:**

- **Blood glucose test**
- **Urine test**
- **Examination of the eye**
- **Pulses**
- **Administration of oral glucose**

- Administration of 50% dextrose intravenously

**TABLE 1: SUMMARY OF THE SKILLS TRAINING PROGRAMME (EMERGENCY CARE AND CLINICAL SKILLS) UNDERTAKEN BY THE TRADITIONAL AND PBL STUDENTS**

	<b>TRADITIONAL CURRICULUM (1996-2000)</b>	<b>PBL CURRICULUM (2001 TO PRESENT DATE)</b>
<b>COURSE FORMAT</b>	<ul style="list-style-type: none"> <li>▪ Offered in 1<sup>st</sup> Year</li> <li>▪ Once off stand alone module – 3 weeks</li> <li>▪ 50 students per group</li> <li>▪ Course conducted 4 times per year</li> </ul>	<ul style="list-style-type: none"> <li>▪ Offered in 1<sup>st</sup> Year</li> <li>▪ Other emergency skills integrated in Year 2 and Year 3</li> <li>▪ Integrated throughout 1<sup>st</sup> Year</li> <li>▪ Time-tabled once per week throughout the year</li> </ul>
<b>THEORETICAL COMPONENT</b>	<ul style="list-style-type: none"> <li>▪ Didactic lectures</li> <li>▪ Students are passive receivers of information</li> </ul>	<ul style="list-style-type: none"> <li>▪ Integrated into paper cases of the relevant Themes</li> <li>▪ Students engage in self-directed learning to research learning goals from their tutorials</li> </ul>
<b>PRACTICAL COMPONENT</b>	<ul style="list-style-type: none"> <li>▪ Demonstrations with Tutor:student ratio of 1:50</li> <li>▪ Demonstrations held daily from 13h00-16h00</li> </ul>	<ul style="list-style-type: none"> <li>▪ Demonstrations with Tutor:student ratio of 1:10</li> <li>▪ Demonstrations held 1 hour per week</li> </ul>
<b>ADDITIONAL SKILLS TRAINING IN THE LAB</b>	<ul style="list-style-type: none"> <li>▪ 5<sup>th</sup> Year Anaesthetic, Paediatric and Obstetric and Gynaecology skills</li> <li>▪ Once off during each module</li> </ul>	<ul style="list-style-type: none"> <li>▪ Appropriate skills for each theme from 1<sup>st</sup> Year to 3<sup>rd</sup> Year (i.e. continuous)</li> </ul>

### **1.1.5. RATIONALE FOR ECP (B) COURSE IN THE MBChB CURRICULUM**

It is not current practice for every ambulance in South Africa to have a trained Medical Practitioner on board. This would, however, be the ideal situation. Listed below are some of the reasons I believe that the ECP (B) Course is an integral part of the MBChB Curriculum:

- Repetition of the emergency skills in the laboratory situation would boost medical students' confidence thus enabling them to deal with any emergency situation, e.g. road accidents, near drownings, cardiac arrests, etc.
- Training in emergency skills would form a basis for their clinical skills ability during the clinical years.
- They would be better equipped to work in Trauma Units/Casualty Departments and Primary Health Care Facilities because of their understanding of the importance of the 'golden hour'. This would lead to better standards of patient care and mortality rates.
- Whilst working at Trauma Units or Primary Health Care Facilities, these medical students would be less dependent on other Specialist Doctors to perform emergency life-saving procedures, e.g. Anaesthetists to intubate airway-compromised patients or Surgeons to perform emergency surgical procedures.
- On successful completion of the ECP (B) Course at the end of first year, the medical student has a professional exit qualification. He/she may have the desire to pursue a career in Emergency Care. Alternatively, the student can work at an Emergency Medical Service on a part-time basis either voluntarily or be able to earn an income for the time spent working on an ambulance.

### **1.2. STATEMENT OF KEY QUESTIONS**

- a. What are the Traditional versus PBL students' perceptions on the role of the ECP (B) Course in the MBChB curriculum and its effects on their clinical ability?

- b. What are the staff's perceptions on the role of the ECP (B) Course in the MBChB Curriculum and its effects on the clinical ability of the traditional students versus those of the PBL students?**
- c. What are the implications of the findings with regard to the integration of the ECP (B) Course in the MBChB Curriculum?**

## **CHAPTER 2 – EDUCATIONAL THEORIES**

### **2.1. THE NEED FOR A CHANGE IN THE MBChB CURRICULUM**

A changing world with persistent and new health problems, ageing populations and the emergence of chronic illness in conjunction with social problems (persistent poverty, unemployment, urbanisation, etc.) and a declining environment, calls for a global strategy for effective health care delivery (WHO, 1994, WFME, 1998; Ludvigsson, 1999).

These health challenges facing our country in particular require a new type of medical graduate. The doctor for the 21st century must be equipped with knowledge, skills and ethical values that allow for cost-effective and holistic health service delivery. The fundamentals of modern medicine must therefore become social rather than scientific, with a need for preventative, supportive and therapeutic procedures that are available to an expanding global population that can generally not afford health care services (Parseil and Bligh, 1995).

According to the World Health Organisation, 1994 “Reorientation of medical education and medical practice for health for all”, some conditions that would allow general practitioners to provide an appropriate and cost-effective health service delivery include:

- The importance of placing medical education in the context of multi-disciplinary education in order to provide primary health care in a multi-disciplinary fashion
- The need for medical schools to improve their contributions to changes in the manner in which health care is delivered through more appropriate education, research and service delivery, and
- The reforms in medical education and medical practice should be co-ordinated, relevant and acceptable

Boelen (1994) has defined the profile of a five-star doctor of tomorrow as having the

following traits:

Care provider, decision-maker, communicator, community leader and manager.

The Nelson R Mandela School of Medicine recognised the need to change its traditional, discipline-based curriculum and thus the aim of the PBL Curriculum 2001 is to produce doctors that are able, in a situation where information is developing and changing rapidly, to produce doctors who will have a holistic approach to their patients and be concerned primarily with prevention rather than cure, to develop a family physician who is concerned with the whole individual and who can assess and meet primary health care needs.

In order to achieve this aim, undergraduate education should develop students who are life-long learners. According to Faure (1972) in Knapper and Cropley (1985), *“Life-long education should be adopted as a guiding principle for reforming education at all levels and in all countries.”* Knapper and Cropley (1985), go on to say that, *“Life-long education can be thought of as a set of organisation and procedural guidelines for educational practice aimed at fostering learning throughout life.”*

The reasons for instilling life-long learning in doctors that we are producing today are social, economic and cultural in nature. In the Emergency Care environment, it is imperative that the Practitioner becomes a life-long learner because patient management protocols, technology and drug regimens are constantly changing. In order to keep abreast with these major changes in therapeutics and be able to save lives rather than kill patients, the Practitioner has to engage in life-long learning.

## **2.2. FACTORS INFLUENCING TEACHING/ LEARNING INTERACTIONS**

In keeping with the paradigm shift which requires a shift from focusing on teacher input to focusing on learner outcomes, it is important for educators to reflect on the curricula that they are involved in and identify how they are going to implement those changes. The move towards problem-based learning is supported by changing theories of language, learning and cognition which could be said to be moving away from transmission models. These models in the past merely deprived many learners of adequate opportunities to realize their full potential because they made them passive recipients or rote learners. It is important to understand the learner himself/herself in the teaching/learning interaction. We are faced with a diverse variety of students who come from differing social/cultural/linguistic, etc. backgrounds. Therefore, a variety of teaching/ learning methods have to be adopted in order to reach all the students equally.

### **2.2.1. UNDERSTANDING THE LEARNER**

In his book *“Learning to Teach in Higher Education”*, Paul Ramsden (Ramsden 1992) puts as principle number 1 *“Interest and Explanation”* and quotes Sawyer (1943):

*“Right at the beginning of any course there should be painted a vivid picture of the benefits that can be expected from mastering the subject, and at every step there should be some appeal to curiosity and to interest which will make that step worthwhile.”* (Page 53)

Students need to know the things that make learning worthwhile for them. Some of these factors are:

- Motivation – a good job at the end of their studies with a good salary to match.
- That they should have an interest in the subject.

- That the subject should be relevant to their interests.
- That the subject should be related to the rest of their programme.
- That if they are going to be assessed, assessment drives learning.
- Whether they have control over their learning.

### 2.2.2. EMOTIONAL FACTORS

Emotional factors such as anxiety, achievement, motivation, introversion/extroversion, effects of praise and blame, locus of control and sense of security/trust, etc. also influence learning. For example, locus of control refers to whether the driving force for behaviour is external or internal to the individual. Some individuals tend to regard what happens after an action of theirs as the result of extraneous factors such as luck, chance or fate. They believe that they have no influence over their own lives. This is referred to as external locus of control. Internal locus of control is when individuals believe that they can exert control over events and their learning environment (Rotter 1966, Meyer *et al.*, 1988:240).

### 2.2.3. THE AFFECTIVE DOMAIN

According to Bloom (1956), the most basic requirement of any learning situation is the learner's ability to switch on, stay attentive and focus attention. They also need to be interested in the learning process and to be committed to the values underlying the course. In order to become competent at an Emergency/Clinical skill, the student has to stay focused on the demonstrations so that they would be able to mimic the performance of the skill.

### 2.2.4. THE COGNITIVE DOMAIN

Bloom's (1956) cognitive factors also affect student learning. In Emergency Care, all of Bloom's cognitive factors are emphasized. Here students are required

to learn the specifics of Emergency Care, i.e. the theory which they then have to understand in order for them to apply it in practice, e.g. when dealing with real patients in the emergency situation. On completion of their patient management protocol, each time they are required to complete a patient report document and in doing so, they have the opportunity of synthesizing their patient management strategies and also evaluating them on the basis of the success/ failure with a patient. The researcher therefore believes that all the Cognitive Factors play a role with an emphasis on the application, for after all it is the ability of applying one's knowledge in the emergency situation that would determine whether one is going to save the patient's life.

#### **2.2.5. PSYCHOMOTOR SKILLS**

In developing the skill of inserting an intravenous infusion, the learner has to use a high degree of physical co-ordination. This is in accordance with Bloom's (1956) psychomotor domain where the student first initiates the skill until precision is achieved. He/she then recognises where in the patient management sequence the skill fits in, and then without even thinking about how to perform the skill, the student must be able to perform the procedure in the emergency situation (naturalisation).

The Emergency Care Course is divided into 'theory' and 'practise'. One of the programme objectives is to develop those psychomotor skills that are necessary to treat patients in emergency situations by using and applying emergency care equipment and material at a basic life support level. Therefore, it is imperative that the learners develop their psychomotor skills in order to perform life-saving techniques.

An example of such a skill is the insertion of an intravenous infusion:

Step 1 – the student is given the skills protocol (a step by step procedure guide)

Step 2 – a demonstration of the procedure is conducted by the Tutor on a model of

an arm

Step 3 – the student performs the procedure on the model (until perfection)

Step 4 - the student performs the procedure on a simulated patient (under very close supervision)

Step 5 - the student performs procedure on a real patient in the emergency situation

Step 6 – the student performs procedure as part of a complete patient management protocol in the emergency situation

#### **2.2.6. SOCIOCULTURAL FACTORS INFLUENCING THE TEACHING/LEARNING INTERACTION**

Medical students are normally of a mixed gender, with a larger intake of females in the recent years. Female students, however, tend to be shy and step back during practical demonstration sessions. The researcher tried to overcome this by making it compulsory for every student to have a turn to perform the skill during the allocated time. There are also a wide variety of religious groups. The researcher's observation was that the Muslim students tend to become easily fatigued during their 'fasting' periods (this may have an impact on their practical performance). She usually allowed these students to perform the skills first, as soon as the demonstration was completed.

Social status and economic class of the student plays an important role in learning. Students who come from 'rich' backgrounds have the advantages of computers at home with all the other luxuries and comforts of a home. They may also come from private schools with all their advantages for example being tutored in small groups. These advantages make it easier for them to develop into deep learners. Whereas students who come from 'poor' backgrounds may not have seen computers and laboratory equipment before during their schooling years. They also attended schools with large classes (60-80 students) and may

have become accustomed to surface learning. It is therefore important for the Tutor to be aware of the diversity of the learners and therefore try to adopt a variety of teaching methods in order to reach all students equally.

#### 2.2.7. TEACHING A FACTUAL SUBJECT – EMERGENCY CARE

According to Sotto (1994), the most important thing in teaching a factual subject is to convey information. However students would get just as much information out of reading a good textbook as from listening to a Tutor. But many learners don't have access to good textbooks, so they come to classes to get the information from the Tutor.

The easiest and most convenient method for the Tutor to convey this information to large classes would be to use the didactic method. According to Ramsden (1992), this method focuses on what the teacher does to students. It shows some affinities with the superficial engagement with content that typifies a surface approach. This encourages rote learning and should not be used if one is aiming to develop a deep, life-long learner.

Sotto (1994) describes an example of an approach used in medical education. He says that in most teaching hospitals, students are first taught basic medical science, then clinical practice. An evaluation of a training programme that integrated the two was conducted and it was found that whereas students on a conventional programme intended to become increasingly cynical about the value of basic science studies, students on an integrated programme increasingly appreciated their value. The integrated programme consisted of a series of medical problems, which were so organised that in solving them, students had to acquire a knowledge of basic sciences. The material to be learnt is given to the learners in the form of a problem and they are invited to tackle the material to be learnt directly, theory and practise are integrated.

Sotto (1994) also recommends the use of worksheets as a medium of instruction. In this way the Tutor does not dominate the lesson with explaining before or after the 'practise'. He also goes on to talk about demonstrations, in which he says that the learner should be invited to tackle the practical task before the Tutor demonstrates it. In this way, the learner will have an idea of what is required, when he/she observes an expert at it. He also says that learning requires active engagement, the learners then have to cover the syllabus at home. It would therefore be helpful to teach in a way, which enables the learners to cover at least some of the syllabus in class (Sotto, 1994).

### **2.3. A CRITICAL ANALYSIS OF THE TRADITIONAL TEACHING STRATEGY OF THE EMERGENCY CARE PRACTITIONER (BASIC) COURSE**

The Emergency Care Practitioner (Basic) Course has a predetermined syllabus that stipulates the duration, topics, aims and objectives and the assessment criteria. This is required by the Health Professions Council of South Africa. The strategy that was adopted from 1996 to 2000 at Medical School to teach the 'theory' component was the didactic lecture. The course was taught to 50 students at a time during a three-week period. Lecture sessions were held from 8h00 to 12h00 followed by classroom practical sessions from 13h00 to 16h00 every day.

#### **2.3.1 THE LECTURE METHOD**

During the lecture session, it was the researcher's task to convey the subject matter essentially by telling the students what they needed to know, or by giving them instructions about some suitable learning activity. This also included factual information, concepts and instructions on how to develop the required skills.

It was the researcher's observation, that during the formal lecture, she was the active participant, transmitting the information to the students who were passive receivers. She had no choice but to go at the same pace with the whole class

although I was aware that students learn at the different rates. In her haste to cover the content, she often raced on, forgetting to stop for a short break, and as a result students became restless and bored. This was also physically exhausting for her because she often lectured for five hours continuously with a short break every hour. Because of the long duration of the lecture sessions, she had to prepare handouts to ensure that information was understood and remembered. This was time consuming and costly. Students often did not attend lectures knowing that they would be able to pick up the notes from their colleagues. Her overall impression of the lecture technique was that students left the lecture room with a superficial understanding of what was going on.

### 2.3.2 CRITICISM OF THE DIDACTIC LECTURE: 1996 – 2000

Billcox (1994) says that, *“It is currently fashionable to criticize the formal lecture method as being inappropriate in the modern learning environment”*. There are many other methods available such as computer-assisted learning, active learning and open learning. He goes on to say that a lecture can achieve anything that can be done by talking to someone. He is, however, of the opinion that the lecture cannot perfect the students’ skills, which can be done during tutorials and private work.

Finucare, Johnson and Prideaux (1998) criticised the traditional approach because:

- It creates an artificial divide between the basic and clinical sciences
- Time is wasted in acquiring knowledge that is subsequently forgotten or found to be irrelevant.
- Application of the acquired knowledge can be difficult
- The acquisition and retention of information that has no apparent relevance can be boring and even demoralizing for students.

### 2.3.3 CRITICISMS OF THE PRACTICAL SESSIONS: 1996-2000

The classroom practical component of the ECP (B) Course was conducted using the group demonstration technique of teaching. Since the researcher was the only person in the Faculty trained in Emergency Care, it was her responsibility to teach the Course alone. The demonstrations were therefore conducted by the researcher, whilst all fifty students observed. The students acquired their practical skills by watching her, “the master” performing them. By carefully observing her behavior, the student was gradually initiated in the secrets of the ‘craft’. The master then decided when the pupil best acquired knowledge and skills to stand on his or her own feet. Due to time constraints, and the large number of students per session, it was extremely difficult for all students to physically practise the skills after they had been taught. The students found this frustrating that they could not gain competency at the skills during the allocated sessions. They often had to attend revision sessions after school hours and on Saturdays. This meant that the researcher had to repeat the demonstrations several times before the students were able to master the skill. This proved tiresome and a waste of valuable time.

According to Petty (1993), *“The aim of most demonstrations is to provide students with a concrete example of good practice to copy or adapt. This provides the ‘doing detail’ which is so vital for learning physical and intellectual skills: it shows how the task is carried out, what the task achieves, to what standard it should be carried out, the indicators that the task has been carried out successfully, and so on.”* From Petty’s checklist, below, it is obvious that the demonstration method that I was adopting was inadequate for student learning.

Listed below is a checklist for demonstrating a physical skill compiled by Petty (1993):

- Did you ensure that they could see?

- Did they know what they were seeing and why it was done that way?
- Did you involve students by question and answer?
- Did you do it slowly enough and a sufficient number of times?
- Did you consider safety?
- Did you give performance indicators so students could self-check during their practise?

#### **2.4. THE INTRODUCTION OF CURRICULUM 2001 – A PROBLEM-BASED LEARNING CURRICULUM**

Both the WFME and WHO have endorsed PBL as an effective educational strategy in Medicine. In PBL, students learn collaboratively by confronting problems at an early stage, thereby learning problem-solving skills and acquiring knowledge about the basic and clinical sciences within the context. Students are thus exposed to clinical problems prior to having learnt the basic and clinical sciences required to solve the problem, much like a doctor would in his/her practice. In the traditional approach, rules and principles are presented first and students then apply (much later) these problems and examples of the rules or principles in action. In PBL students tackle the problems or examples and then discover the rules and principles for themselves (Davies & Harden. 1999).

Evidence indicates that active participation in learning is more satisfying than passive transfer of information from the teacher to the student and that active learning leads to enhanced retention and recall. PBL emphasizes active student-centered learning in which students are challenged to examine, enquire, reflect, make meaning, and understand the sciences basic to medicine as they develop approaches toward the solution of defined problems in a context relevant to their future professional careers. The discussion of clinical or other types of problems in small groups promotes a correctness of ideas and concepts (Schmidt, 1983) and fosters co-operation rather than competition among students (Schmidt,1983).

PBL curricula are often integrated across the sciences basic to medicine, as well as among departments and activities such as clinical skills and doctor-patient-society courses that have traditionally been restricted to particular years of the curriculum (Walton and Mathews. 1989). By utilizing cases and problems designed to match student perception of their future profession and their current knowledge, PBL serves as a powerful stimulus for their intrinsic motivation to learn (Dolmans, 1997). The integration of subjects also permits an emphasis on other important aspects of the training of future competent health professionals, such as communication, teamwork, and professional attitudes, values and ethics. The combination of early and sustained community and primary care experiences with carefully selected PBL cases relevant to priority community health problems can synergize with the promotion of population and community health education (Neufeld *et al.*, 1992).

Charlin (1998) defined seven criteria for student learning in PBL based on educational principles. These are:

- The problem acts as a stimulus for learning
- It is an educational approach, not an isolated instructional technique
- It is a student-centered approach

The students learning must involve:

- Active processing of information
- Activation of prior knowledge
- Meaningful context
- Opportunities for elaboration/organisation of knowledge

## **2.4.1. THE ORGANISATION OF TEACHING IN THE SKILLS LAB – CURRICULUM 2001**

### **2.4.1.1. INTERACTION BETWEEN THEORY AND PRACTICE**

Students can acquire the necessary clinical/emergency skills at the moment they study the relevant theoretical knowledge. For example, the students study the theoretical aspects of a complaint in the morning, and are then taught the relevant clinical skill that afternoon in the Skills Lab. Thus at an early stage, integration of theory and practise can take place.

### **2.4.1.2. SKILLS TRAINING IS ORGANISED ON A LONGITUDINAL BASIS**

Since skills training in the Skills Lab is ongoing during the year, complex skills can be unraveled into smaller and less complex elements. Students can start off with very basic principles of the examination of a patient and move on to the next stages of complexity in these techniques. At the end of their studies, the student should be able to perform a complete doctor-patient encounter in a systematic and technically correct way.

### **2.4.1.3. AT THE STUDENTS' OWN PACE**

A number of different training situations are provided. Students may book extra sessions after hours or during the weekend. Clinical Tutors, teaching aids, models and skills protocols are available for students to practise the skills they feel uncertain about. In this way, they have many possibilities to acquire and maintain their clinical skills ability.

## **2.4.2 DIDACTIC PRINCIPLES FOLLOWED IN THE SKILLS LAB**

### **2.4.2.1. GRADUAL INCREASE IN THE COMPLEXITY OF SKILLS**

A skill can best be acquired when the smallest constituting elements are identified. By step by step mastering of these elements, students can develop their ability. When skills are practised in a variety of circumstances and contexts, the students will finally master the whole action in a flexible way. Therefore skills training in the Skills Lab increases in complexity throughout the course years.

### **2.4.2.2. GRADUAL INCREASE IN COMPLEXITY OF PRACTICING SITUATIONS**

The clinical skills are acquired in different practicing situations. Analogues to the increase in complexity of skills, these practicing situations increase in complexity. This order should be regarded as a starting point. If at any stage a student considers his level of mastery of the particular skill insufficient, he can go back to a less complex practicing stage, and practise until he is secure enough to proceed to the next stage.

### **2.4.2.3. GRADUAL INCREASE IN INTEGRATION OF DIFFERENT SKILLS AND KNOWLEDGE**

Not only are the clinical skills acquired in an increasingly complex situation, but during the curriculum students also get many opportunities to use their skills and knowledge in simulated doctor-patient encounters in the Lab. With the use of simulated patients, every student can practise an entire doctor-patient interaction where they integrate their knowledge as well as physical examination and communication skills. In this way, at an early stage in their study, they deal with complex multi-disciplinary problems that patients present with.

## 2.5. PBL IN ACTION

*Barrows (1980) says that "As problem based courses flourish and develop it stands as a reminder that PBL in action is not a unity but, rather, an institutional educational system that each school should develop according to its own requirements, objectives and resources." He goes on to say that PBL is the practice of learning through research – a way of learning which contributes significantly to the students capacity for life-long learning, both in their professional and everyday lives. (Barrows (1980))*

The need to re-define basic medical education has been fully recognised and accepted by medical schools around the world and educational principles on which curricula should be based have been put forward. The Nelson R Mandela School of Medicine has taken this step forward in changing its traditional curriculum to that of PBL in the hope that undergraduate medical education will make significant progress towards achieving its educational goals and providing communities with the doctors they need.

## **CHAPTER 3 – METHODS AND METHODOLOGY**

The approach that the researcher has described and adopted can be characterised as ethnographic, naturalistic, holistic, descriptive, ideographic and interpretive. This approach is most appropriate for evaluatory learning, teaching and staff development in higher education since they are human phenomena involving complex relationships. The aim is to effect change and improve practice and to bridge the gap between educational research and practice as well as theory and practise.

### **A. METHODS**

#### **3.1 THE STUDY**

The study was conducted in September 2004 at the University of KwaZulu-Natal, Nelson R Mandela School of Medicine.

#### **3.2 SUBJECTS**

The study involved students and staff who are presently working with the MBChB Curriculum at the Nelson R Mandela School of Medicine. The subjects were selected from a convenience sample as follows:

- ◆ 30 students in 3<sup>rd</sup> year PBL Curriculum. These students have completed the integrated ECP (B) Course and are now undertaking the Clinical Methods Course (hospital based) that is a component of the PBL Curriculum.
- ◆ 30 students in 5<sup>th</sup> year. These students attended the ECP (B) Course in their first year of study. At that time, the ECP (B) Course was a stand-alone module of three weeks duration.
- ◆ 5 Clinical Skills Tutors employed by the Skills Resource Facility. They are responsible for teaching the Clinical Skills component of the PBL Curriculum in the Skills Lab (Lab-based teaching with simulated patients and models).
- ◆ 5 Clinical Tutors employed by the University and the KwaZulu-Natal Department of Health. These clinicians work at King Edward Hospital providing patient service.

They are also responsible for the tutoring and supervision of the medical students (Traditional and Curriculum 2001) who are working with patients in the wards.

### 3.3. DATA COLLECTION: QUESTIONNAIRES AND INTERVIEWS

#### 3.3.1. QUESTIONNAIRES

Collection of data involved a questionnaire that was handed out to the 3<sup>rd</sup> and 5<sup>th</sup> year medical students (Appendix 1). The questionnaire was a research tool that was designed to answer the first key question of the study: *What are the Traditional versus PBL students' perceptions on the role of the ECP (B) Course in the MBChB Curriculum and its effects on their clinical ability?* The questionnaire contained both a rating scale as well as open-ended questions. According to Cohen, Manion and Morrison (2001), "Rating scales are widely used in research, for they combine the opportunity for a flexible response with the ability to determine frequencies, correlations and other forms of quantitative analysis." A Likert scale was used that provided a range of responses to a given statement or question. Through the use of the rating scale, the researcher was able to fuse measurement with opinion. Due to the rating scales being limited in their usefulness because of their rigidity of response caused by the need to select from a given choice, the questionnaire was tailored by including open-ended questions. In this way, the respondents were able to reply in their own terms and own opinions. In addition to ticking numbers and boxes, the respondents were able to take responsibility for and ownership of the data.

The questionnaires were handed out after a skills training session and collected during the following skills training session that was held during the next week. This was done with both groups of students, i.e. 30 PBL students and 30 Traditional Curriculum students. There was a 100% return of the questionnaires.

#### 3.3.2. INTERVIEWS

The purpose of the interviews was to answer the second key question of the study: *What are the staff's perceptions on the role of the ECP (B) Course in the MBChB*

*Curriculum and its effects on the clinical ability of the Traditional students versus those of the PBL students?* Semi-structured interviews were conducted at the Skills Resource Facility with the five Clinical Skills Tutors. These interviews were conducted individually and lasted 30 minutes. All the interviewees were posed the same questions in the same format and in the same order, according to the interview schedule (Appendix 3). The interviews with the five Clinical Tutors (hospital-based) were conducted at King Edward Hospital. These interviews also followed the same format, with each interview lasting 30 minutes and each interviewee being asked the same questions from the interview schedule (Appendix 3). A Dictaphone was used to record these sessions with permission being obtained from each interviewee prior to the interview.

## **B. METHODOLOGY**

### **3.4. QUANTITATIVE RESEARCH**

According to Cohen *et al.* (2001), “Methods mean that range of approaches used in educational research to gather data which are to be used as a basis for reference and interpretation, for explanation and prediction.” They go on to say that, if methods refer to techniques and procedures used in the process of data gathering, the aim of methodology then is, in Kaplan’s words:

*“to describe and analyse these methods, throwing light on their limitations and resources, clarifying their presuppositions and consequences, relating their potentialities to the twilight zone at the frontiers of knowledge. It is to venture generalizations from the success of particular techniques, suggesting new applications, and to unfold the specific bearings of logical and metaphysical principles on concrete problems, suggesting new formulations.”*

The approach used in this study was qualitative. Qualitative research may be seen as a “window” through which we might “see” and comment on significant social issues. These issues may include theoretical questions about how social life is organised, how institutions operate, and about the ways in which individuals and groups make sense of their lived experiences. Cohen *et al.* (2001).

According to Burgess (1985), the following are some attributes of many qualitative projects:

- ◆ The focus is an observed present, but the findings are contextualised within a social, cultural and historical framework.
- ◆ The research is conducted within a theoretical framework. While these may only be a small number of questions to a study, further questions may arise during the course of the investigation.
- ◆ The research involves close, detailed intensive work. The researcher participates in the social situation under study.
- ◆ The major research instrument is the researcher who attempts to obtain a participants' account of the social setting.

### 3.5. PARADIGMS OF RESEARCH

Educational research is affected by a battle between at least two competing paradigms, reflecting the dichotomy in the fundamental debate of what philosophy should inform the educational research activities. The term, "paradigm", is used in Kuhn's (1970) definition:

"A paradigm is what the members of a scientific community share ...it stands for the entire constellation of beliefs, values, techniques, and so on, shared by the members of a given community" (Zuber-Skerritt, 1992)

Instead of studying a complex situation through the traditional paradigm of taking the situation apart into components, studying the parts (through controlled variation of single variables) and then reassembling them again into the original whole; the authors below suggest a holistic approach to educational research in Zuber-Skerritt (1992):

1. Cronbach (1975) – proposed that researchers should concentrate on "interpretation" in context as opposed to generalisations

2. Stake (1967) – calls for more attention to the contingencies among background conditions, learning/teaching activities, and scholastic outcomes in curriculum evaluation
3. Parlett and Hamilton (1976) – proposes an alternative methodology appropriate to the interaction between the student and the complex context within which he/she works

### 3.5.1. THE INTERPRETIVE PARADIGM

Locke, Silverman and Spirduso (1998) categorise qualitative research into the interpretive and critical paradigms. *“The purpose of interpretive research is often to understand the setting for social action from the perspective of the participants whereas the purpose of critical research is the understanding and critique of power within society. The interpretive paradigm is characterised by a concern for the individual and describes and explains human behaviour by means of methods that are appropriate.”*

Since the methods used in this research, i.e. the questionnaire and interviews are in line with the methods that are commonly used by interpretive researchers, the researcher is working within the interpretive paradigm. Cohen *et al.* (2001) are of the opinion that, “The aim of scientific investigation for the interpretive researcher is to understand how the glossing of reality goes on at one time and in one place and compare it with what goes on in different times and places.” Similarly, the researcher is investigating how students are able to use and adapt the emergency skills that they obtain in the lab setting to real patient encounters. The theories in the interpretive paradigm become sets of meanings, which yield insight, and understanding of people’s behaviour. From this, it can be seen that a hope for a universal theory, which characterises the normative outlook, gives way to multifaceted images of human behaviour as varied as the situation and contexts supporting them.

According to Cohen *et al.* (2001), “Phenomenology is a theoretical point of view that advocates the study of direct experience taken at face value; and one which sees behaviour as determined by the phenomena of experience rather than by

external, objective and physically described reality (English and English, 1958).” Phenomenography, on the other hand, is a tradition, which focuses on the natural, experienced human world. Instead of applying their pre-conceived ideas to reality, educational researchers study how this world actually appears to people or how people experience and conceive the world around them. To explore the phenomenography of learning, the researcher had to find out by means of the questionnaires and interviews what and how the students learn in a particular context. She has been able to gain insights into the range of students’ understandings and misunderstandings of the subject taught; and is now in a better position to facilitate improved learning.

The phenomenological movement can be divided into the transcendental phenomenology and existential phenomenology. With transcendental phenomenology we are asked to look beyond the details of everyday life to the essences underlying them. Cohen *et al.* (2001), say that “*Our conscience of which there are three elements the ‘I’ who thinks, the mental acts of this thinking subject, and the intentional objects of these mental acts.*” Therefore the aim of this method is the dismembering of the constitution of objects in such a way as to free us from all preconceptions about the world.

Existential phenomenology, on the other hand, is concerned with the problem of understanding the meaning structure of the work of everyday life. According to Schutz (1962), “*The way we understand the behaviour of others is dependent on a process of typification by means of which the observer makes use of concepts resembling ‘ideal types’ to make sense of what people do.*” Thus in order for Consultants in the hospital to assess the students’ ability to perform emergency skills on real patients, they have to measure their performance against the ‘ideal’ patient-care scenario.

The fund of everyday knowledge by means of which we are able to typify other people’s behaviour and come to terms with social reality varies from situation to situation. We thus live in a world of multiple realities. The student has to be able to switch from the lab-based scenario to that of the real patient scenario.

*"The social actor shifts between these provinces of meaning in the course of his everyday life. As he shifts from the world of work to that of home and leisure or to the world of religious experience, different ground rules are brought into play. While it is within the normal competence of the acting individual to shift from one sphere to another, to do so calls for a leap of consciousness to overcome the differences between the different worlds."* (Burrell and Morgan 1979)

### 3.5.2. CRITICISM OF THE INTERPRETIVE APPROACH

Giddens (1976) in Cohen *et al.* (2001):27 argues against the likely relativism of the interpretive paradigm:

*"No specific person can possess detailed knowledge of anything more than the particular sector of society in which he participates, so that there still remains the task of making into an explicit and comprehensive body of knowledge that which is only known in a partial way by lay actors themselves."*

Bernstein (1974) in Cohen *et al.* (2001):27 says:

*"And what of the insistence of the interpretive methodologies on the use of verbal accounts to get at the meaning of events, rules and intentions? Are there not dangers? Subjective reports are sometimes incomplete and they are sometimes misleading."*

Bernstein's criticism is directed at the concern of phenomenologists with the meaning of situations and the ways in which these meanings are negotiated by the actors involved. According to Cohen *et al.* (2001), "Bernstein's point is that the very process whereby one interprets and defines a situation is itself a product of the circumstances in which one is placed." We must therefore consider the power of others to impose their own definitions of situations upon participants. The danger of the interpretive approach is their relative neglect of the power of external structural forces to shape behaviour and events.

Cohen *et al.* (2001) say that, *"There is a risk in interpretive approaches that they become hermetically sealed from the world outside the participant's theatre of activity – they put artificial boundaries around subject's behaviour."* The

interpretive and qualitative theories can also be criticized for their narrowly micro-sociological persuasion.

### 3.6. MY ROLE AS THE RESEARCHER

I have been an interested party in this research project, because I was involved in teaching and co-ordinating the ECP (B) since its inception in 1996. I have taught the Course in the Traditional Curriculum and was also responsible for the integration of the Course into the PBL Curriculum. Subsequently I have been teaching the Course in the PBL Curriculum, i.e. from the 2001 to present.

As the research 'instrument' I have had some influence on the study and the process of the research. According to Lincoln and Guba (1989), "Fourth generation evaluation is a form of evaluation in which the claims, concerns, and issues of stakeholders serve as organizational foci (the basis for determining what information is needed)." Stakeholders, by definition, have something at stake in the evaluand – the entity being evaluated. Lincoln and Guba (1989) continue, "stakeholders may be placed at hazard or in jeopardy by the evaluation, as the evaluand is assessed with respect to some set of standards." I may be placed at risk since the evaluation results might show negative findings. A stakeholder having any amount of the stake, expects to provide and receive input into any evaluation that affects the stake. Since I have been teaching the ECP (B) Course, I may be placed in a situation where I would need to exercise some control on behalf of my own interests.

Lincoln and Guba (1989) say that "*Stakeholders are open to exploitation, disempowerment, and disenfranchisement.*" This is so because evaluation is a form of enquiry, of which the end product is information. Since information is power, then evaluation is powerful. Lincoln and Guba (1989) go on to say that "The power of an enquiry can be used in a variety of ways inimical to the interests of stakeholder groups." On the one hand, the information obtained in an evaluation can be used against the stakeholders. On the other hand, power can also be withheld by the expedient of not making information available except to selected stakeholder groups. This effect may be disempowerment.

Disempowerment brings with it disenfranchisement. Open societies can impede informed decision making by arranging for differential allocation of information, or by withholding information entirely from certain involved stakeholders. Lincoln and Guba (1989) say that "It is not likely, given modern social and technical complexities, that meaningful involvement of stakeholders in deciding how an evaluation is to be focused, what information is to be collected, and how interpretations are to be made will guarantee that those stakeholders will not be exploited, disempowered, or disenfranchised to some degree." I believe that I may suffer these misfortunes in much greater degree if I am denied such inputs.

Lincoln and Guba (1989) say that "*Stakeholders are users of evaluation information.*" As a stakeholder, I will use the information that I see as clearly responsive to the claims, concerns and issues that I have. Given an opportunity to have input into the evaluation process, and having those inputs honoured, I would be able to see a way to flex my 'political muscles' and perhaps more importantly, I would be able to do it from a base of informational legitimisation that I would not have otherwise.

"Stakeholders are in a position to broaden that range of evaluative inquiry to the great benefit of the hermeneutic/dialectic process." (Lincoln and Guba, 1989). When evaluation is focused on a few pre-ordinate objectives, decisions, or effects, their results must necessarily be limited and formally quite predictable. It is this predictability that makes it possible to pre-design an evaluation (or other conventional) enquiry. But when one does not know in advance what information is to be collected, it is literally impossible to design an inquiry that will provide it. Lincoln and Guba (1989) say that, "The utilization of stakeholder inputs (claims, concerns, and issues) as foci for organizing an evaluation forces a degree of open-endedness well beyond that usually contemplated in an evaluation." I as the researcher have become intimate with such claims, concerns and issues, since I have been the one person in the Faculty who has been working with the ECP (B) Course since its inception.

### 3.7. THE QUESTIONNAIRE

The questionnaire was designed using rating scales and open-ended questions. The general purpose of the questionnaire was to ascertain whether the students were able to perform the various emergency skills in the classroom (pre-clinical) setting and then to see whether they were able to perform these emergency skills on real patients in the clinical situation.

The type of questionnaire that was selected was semi-structured since it is a general rule of thumb that the smaller the size of the sample, the less structured, more open and word-based the questionnaire may be. The researcher would also be able to make comparisons across groups in the sample. Cohen *et al.* (2001):250 say that, "An ideal questionnaire possesses the same properties as a good law."

*"It is clear, unambiguous and uniformly workable. Its design must minimize potential errors from respondents....and coders. And since peoples' participation in surveys is voluntary, a questionnaire has to help in engaging their interest, encouraging their co-operation, and eliciting answers as close as possible to the truth" (Davidson, 1970).*

Rating scales were used since they combine the opportunity for a flexible response with the ability to determine frequencies, correlations and other forms of quantitative analysis. The researcher was thus able to have the freedom of fusing measurement with opinion and quantity and quality. The Likert scale (named after its deviser, Kenis Likert) was chosen because a degree of sensitivity and differentiation of response was able to be built in whilst still generating numbers. A Likert scale provides a range of responses to a given question or statement. It has been suggested that the attraction of rating scales is that they provide more opportunity than dichotomous questions for rendering data more sensitive and responsive to respondents. "This makes rating scales particularly useful for tapping attitudes, perceptions and opinions of respondents." Cohen *et al.* (2001)

Although the rating scales are sensitive instruments, they are also limited in their usefulness to the researcher by their rigidity of response caused by the need to

select from a given choice. The questionnaire was therefore tailored even more to the respondents by including open-ended questions to which the respondents could reply in their own terms and own opinions. An open-ended question section was designed in the questionnaire to invite an honest, personal comment from the respondent in addition to the Likert scale. Open-ended questions can catch the authenticity, richness, depth of response, honesty and candour, which are hallmarks of qualitative data Cohen *et al.* (2001). According to Cohen *et al.* (2001), open-ended questions make it difficult for the researcher to make comparisons between respondents, as there may be little in common to compare and open-ended questionnaires take much longer than placing a tick in a rating scale response box. Time during the Skills sessions was utilised to have the questionnaire completed. Fortunately, both the third year students and fifth year students have scheduled clinical skills sessions at the Skills Lab. This situation enabled the researcher to have good control of the issuing and receipt of the completed questionnaires and therefore a 100% return of questionnaires was achieved.

### 3.8. THE SEMI-STRUCTURED INTERVIEW

The research interview has been defined as a two-person conversation initiated by the interviewee for the specific purpose of obtaining research relevant information, and focused by him on content specified by research objectives of systematic description, prediction or explanation (Cannell and Kahn, 1968) in Cohen *et al.* (2001).

Treece and Treece (1973) highlight some of the advantages of using interviews in research:

- ◆ Data from each interview are usable, whereas this may not be true for each questionnaire that is returned. Reasons for unusable questionnaires include blank items, misunderstandings, late arrival and incorrect completions.
- ◆ Depth of response can be assured, since the researcher can pursue any question of special interest to him/her. This was true because the researcher had chosen to conduct semi-structured interviews and she used the opportunity to ask

questions that were not initially included but that added to the richness of the interview content.

- ◆ If, while the interviewee is being questioned, he does not understand one of the questions, he may ask to have it repeated. By rewording the item, the researcher can make the question more meaningful to the interviewee.
- ◆ No items are overlooked by the interview method. The interviewer is more likely to be careful that all questions are answered than is the person who fills out a questionnaire.
- ◆ Interviews provide greater flexibility. Objections can be pointed out and rapport regained so that the respondents are able, or more willing, to respond and co-operate.
- ◆ The interview allows more opportunity to appraise the validity of the report because the interviewer is present to observe what is taking place. Verbal and non-verbal cues that would not appear on a questionnaire can be noted.
- ◆ The interview is a suitable technique for revealing facts about complex emotion-laden topics or for thoroughly investigating the emotion that may underlie a response. Even though the topic may not be conducive to open, frank discussion, an atmosphere that encourages confidentiality will help that researcher to be more successful in obtaining information than will the more or less rigidly structured questionnaire.
- ◆ It may be possible to save time and energy by the interviewee being able to answer all the questions in a few minutes.

Some of the disadvantages that Treece and Treece (1973) have identified include that:

- ◆ It requires more time for the researcher to locate and interview each person individually. Fortunately for the researcher, the Clinical Tutors teach in the Skills Lab and are therefore easily accessible. The other consultants work at King Edward Hospital, which is located next to the Medical School, and they were also easily accessible.
- ◆ The interpersonal relationship between subject and researcher is different for each interview. The researcher felt more comfortable interviewing the Clinical

Tutors from the Skills Lab since they work in the same Department. The researcher was a bit more tense during the interviews with the consultants from the hospital, but all the necessary questions were covered.

- ◆ The cost in time and effort is greater for the interview as compared with mailing a questionnaire. The interviews lasted several days, whereas the questionnaire was completed during one of the skills sessions.

Treece and Treece (1973), say that “several problems arise with the utilization of interviews as the data-gathering process.” Some of these problems include:

- ◆ Responses may be only opinions
- ◆ The subject may attempt to seek approval of the interviewer. This could have been the case with the clinicians from the Skills Lab.
- ◆ A subject is more difficult to find in person than by letter.
- ◆ The subject may be nervous because his answers are being recorded.
- ◆ The researcher needs time to write out responses.

The researcher tried to alleviate some of these problems by identifying herself and highlighting the purpose of the research. A rapport with the interviewees was established by being friendly, considerate and enthusiastic. She tried not to pressurise the interviewees unduly. She assured them of anonymity and treated each of them with respect because they were volunteering their time to me.

Treece and Treece (1973) state that the interviewer needs to develop the art of asking questions and giving cues that will produce answers describing exactly how the subject feels about the questions under consideration. When she asked questions, she tried to use the proper cues to elicit the true feelings of the subject. The researcher was able to help the interviewees attain a certain degree of depth and insight into both the topic and himself/ herself.

### 3.9. SAMPLING

After determining what the purpose of the research is, one must answer the following questions: to whom are the results intended to apply, and to what group will the conclusions be justifiably relevant?

The research directly involves the staff and students of the Nelson R Mandela, School of Medicine and thus the generalisations of the research will be extended to them. Black (1993) says that *"The term sample tends to imply a group selected from a larger population in some way so as to ensure that, (for the characteristics being investigated), the group is typical."* He goes on to say that *"How a researcher actually chooses a sample from a population will determine whether the members of the sample group can be considered to be truly representative of that population."*

At the Nelson R Mandela, School of Medicine there are approximately two hundred students in each year of study. The third and fifth year students attend Skills Training sessions in groups of thirty. It was therefore convenient to select a group of thirty students to complete the questionnaire. Cohen *et al.* (2001) state that, "Convenience sampling involves choosing the nearest individuals to serve as respondents. Captive audiences such as students or student teachers often serve as respondents based on convenience sampling." The researcher simply chose the sample from those to whom she had easy access. The Clinical Tutors (lab-based) all work at the Skill Lab and therefore they were easily accessible. The consultants from King Edward Hospital were selected on their availability. This was also a matter of convenience.

Every element of research should not be arbitrary but planned and deliberate and the criterion of planning must be fitness for purpose. The selection of a sampling strategy must be governed by the criterion of suitability. The choice of which strategy to adopt must be mindful of the purposes of the research the time scales and constraints on the research, the methods of data collection, and the methodology of the research. The sampling chosen must be appropriate for all these factors if validity is to be served. It is for these reasons that the researcher has selected the methods and methodology that has been described.

## **CHAPTER 4: DISCUSSION OF RESULTS**

### **A. THE QUESTIONNAIRE**

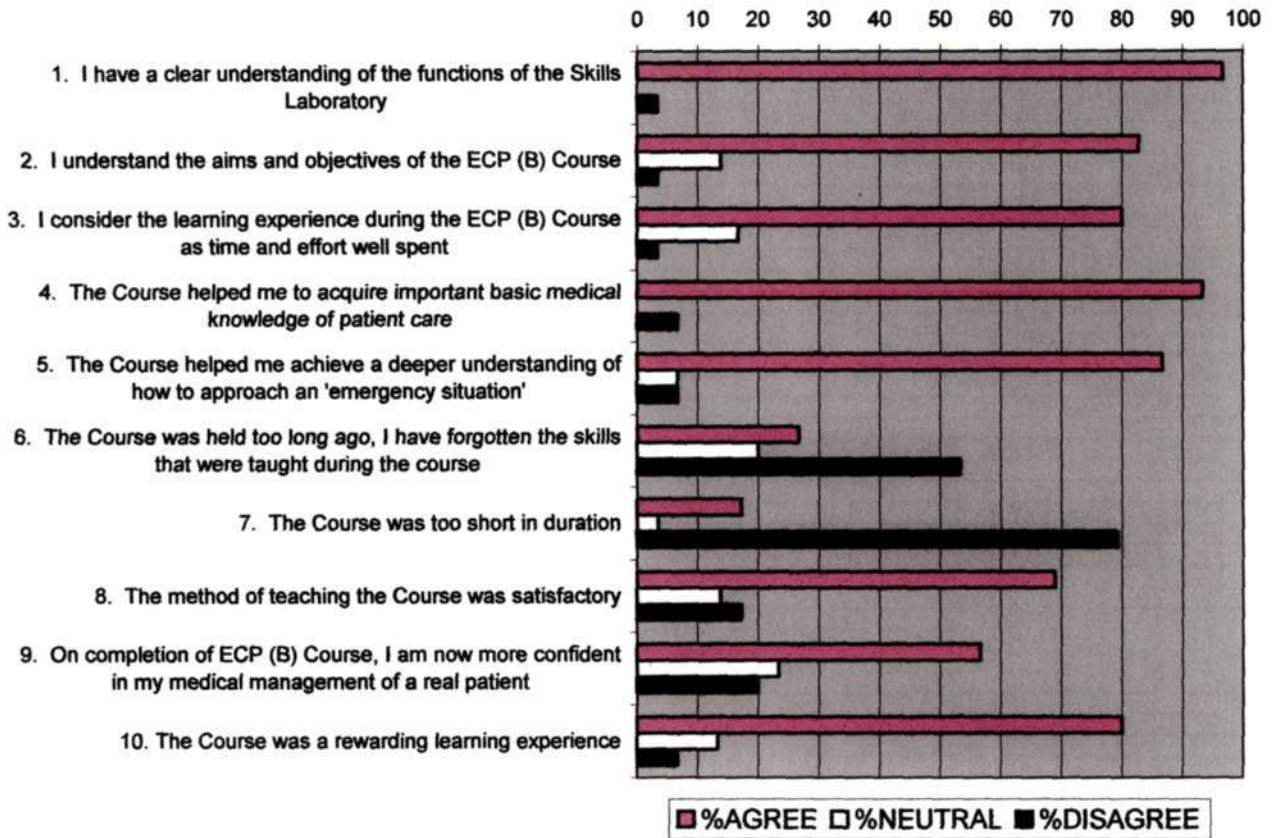
The evidence that was collected from the questionnaire was insufficient to conclusively find a difference in the learning of the Traditional versus the PBL students. The 'stakeholders' of the MBChB Curriculum will, however, most certainly be able to make use of the information that has been obtained. Also, this study was qualitative in nature and the two groups of students that were surveyed did not represent a control and a 'placebo' sample. The third years were selected because they had done the ECP (B) Course in their first year of study in the PBL format whereas the fifth years had done the Course in their first year of study as a stand-alone module in the Traditional format.

The aim of the questionnaire was to ascertain whether the students were able to perform the various emergency skills in the Skills Lab (pre-clinical) setting and then to see whether they were able to perform these emergency skills on real patients in the clinical situation. It was also used to collect information to answer the first key question: *What are the Traditional versus PBL students perceptions on the role of the ECP (B) Course in the MBChB Curriculum and its effects on their clinical ability?*

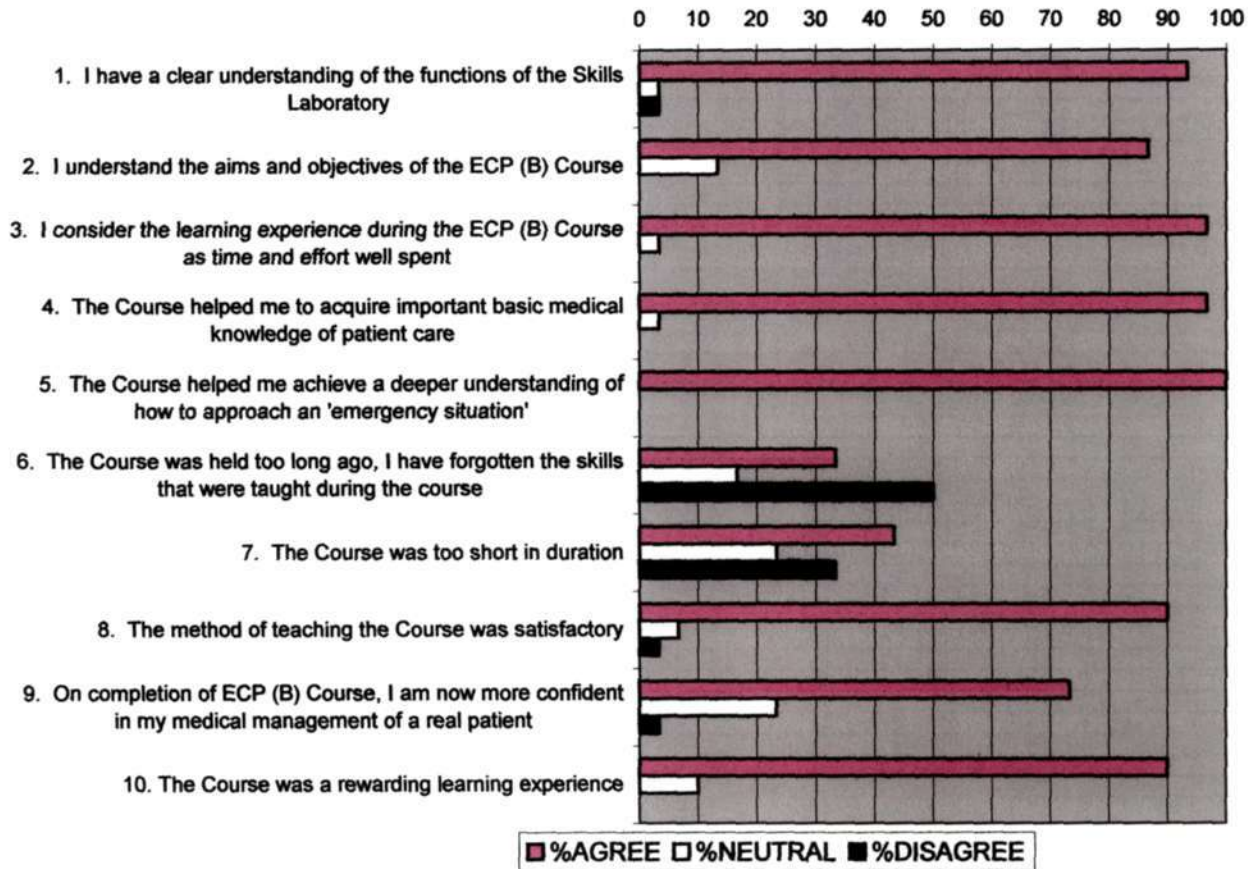
**RESULTS OF THE QUESTIONNAIRES HANDED OUT TO THE STUDENTS: 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR MBChB 2004 (APPENDIX 1)**

**4.1. RESPONSES TO THE LIKERT SCALE QUESTIONS (APPENDIX 1 – PART A, B,C,D)**

**4.1.1. 3<sup>RD</sup> YEAR RESPONSES TO THE GENERAL INFORMATION ABOUT THE ECP (B) COURSE (APPENDIX 1, PART A)**



4.1.2. 5<sup>TH</sup> YEAR RESPONSES TO THE GENERAL INFORMATION ABOUT THE ECP (B) COURSE (APPENDIX 1, PART A)



4.1.3. TABLE 2: COMPARISON BETWEEN THE 3<sup>RD</sup> YEAR AND 5<sup>TH</sup> YEAR RESPONSES TO THE GENERAL INFORMATION ABOUT THE ECP (B) COURSE (APPENDIX 1, PART A)

	3rd Yr % AGREE	5th Yr % AGREE	3rd Yr % NEUTRAL	5th Yr % NEUTRAL	3rd Yr % DISAGREE	5th Yr % DISAGREE
1. I have a clear understanding of the functions of the Skills Laboratory	97	93	0	3	3	3
2. I understand the aims and objectives of the ECP (B) Course	83	87	14	13	3	0
3. I consider the learning experience during the ECP (B) Course as time and effort well spent	80	97	17	3	3	0
4. The Course helped me to acquire important basic medical knowledge of patient care	93	97	0	3	7	0
5. The Course helped me achieve a deeper understanding of how to approach an 'emergency situation'	87	100	7	0	7	0
6. The Course was held too long ago, I have forgotten the skills that were taught during the course	27	33	20	17	53	50
7. The Course was too short in duration	17	43	3	23	79	33
8. The method of teaching the Course was satisfactory	69	90	14	7	17	3
9. On completion of the ECP (B) Course, I am now more confident in my medical management of a real patient	57	73	23	23	20	3
10. The Course was a rewarding learning experience	80	90	13	10	7	0

#### **4.1.4. COMPARISON BETWEEN THE 3<sup>RD</sup> YEAR AND 5<sup>TH</sup> YEAR STUDENTS RESPONSES TO THE GENERAL INFORMATION ABOUT THE ECP (B) COURSE (TABLE 2, Page 38)**

The functions of the Skills Laboratory and the aims and objectives of the ECP (B) Course were clearly understood by both groups of students (Q1 and Q2). Both, the Traditional and PBL students were given the Emergency Care Course manual at the start of the Course. The Course manual clearly outlines the aims and objectives of the ECP (B) Course. Therefore, the students were familiar with and had a clear understanding of the expectations of the ECP (B) Course.

Ninety-seven percent of the 5<sup>th</sup> years considered the learning experience during the ECP (B) Course as time and effort well spent whereas eighty percent of the 3<sup>rd</sup> years felt the same (Q3). The researcher believes that the 5<sup>th</sup> years are more senior students and have thus been working with real patients in emergency situations for a longer period and are now able to identify and utilise the skills that were learnt during the ECP (B) Course and are thus able to appreciate the knowledge that they have gained from the Course.

All of the 5<sup>th</sup> years believed that they achieved a deeper understanding of how to approach 'emergency situations' whereas eighty seven percent of the 3<sup>rd</sup> years felt the same. (Q5). Here again, the 3<sup>rd</sup> years have only just recently been exposed to real patients and emergency situations, so they have not yet been allowed the opportunity to deal with 'emergency situations' and to test their abilities, under these circumstances.

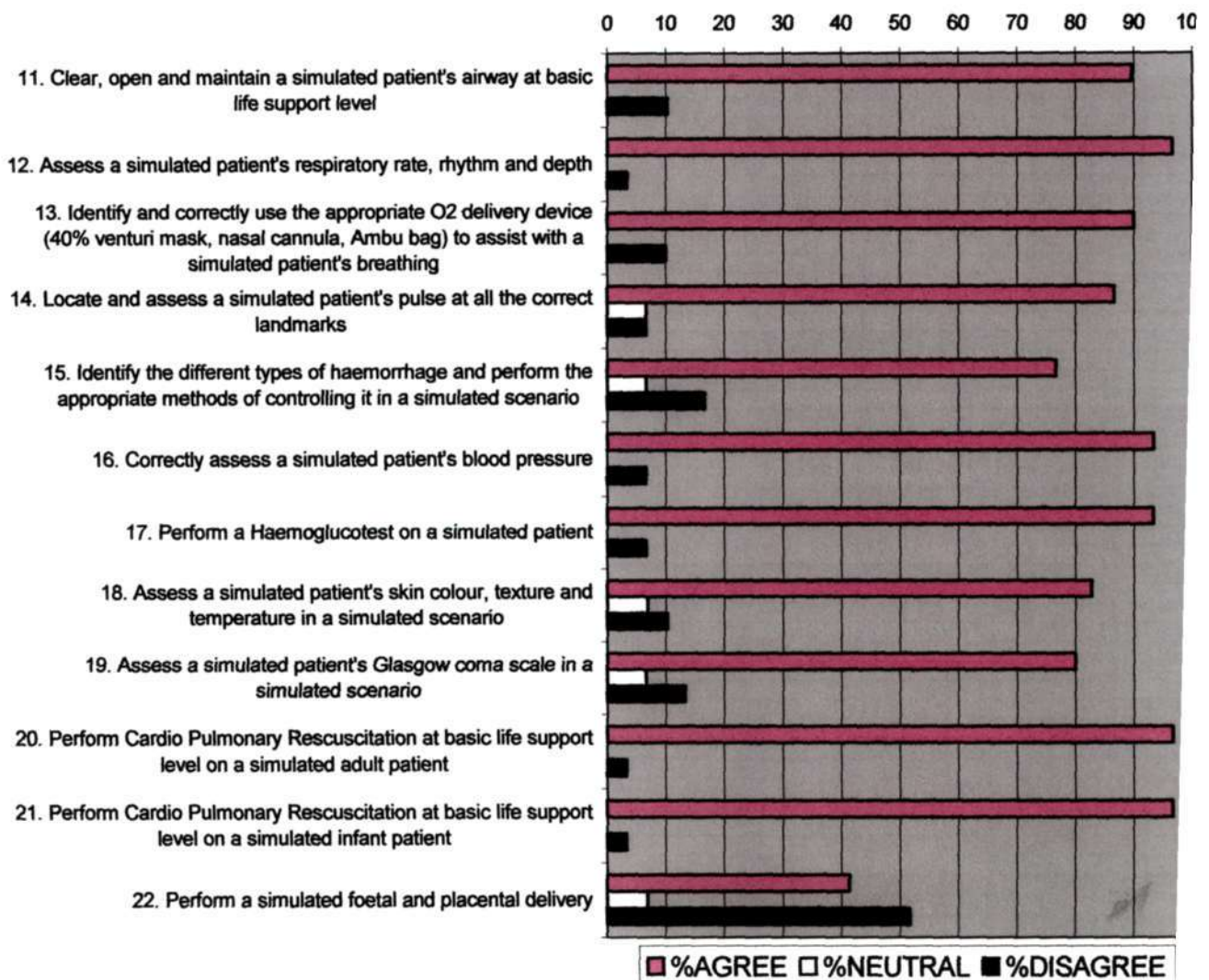
Forty-three percent of the 5<sup>th</sup> years believed that the ECP (B) Course was too short in duration and only seventeen percent of the 3<sup>rd</sup> years felt that the Course was too short. As stated earlier in the study, the ECP (B) Course was taught to the 5<sup>th</sup> years in a three week stand-alone module whereas the course was integrated into the entire first year of the PBL Curriculum (Q7). Therefore the 5<sup>th</sup> years felt that the duration was too short. They did not have enough time to perfect all the emergency skills on the models/simulated situation before being expected to perform them on real patients.

Ninety percent of the 5<sup>th</sup> years felt that the teaching method of the Course was satisfactory (Q8). The teaching method that was adopted, was that of the lecture format for the 'theory' and practical demonstrations for the 'practise'. Sixty nine percent of the 3<sup>rd</sup> years felt that

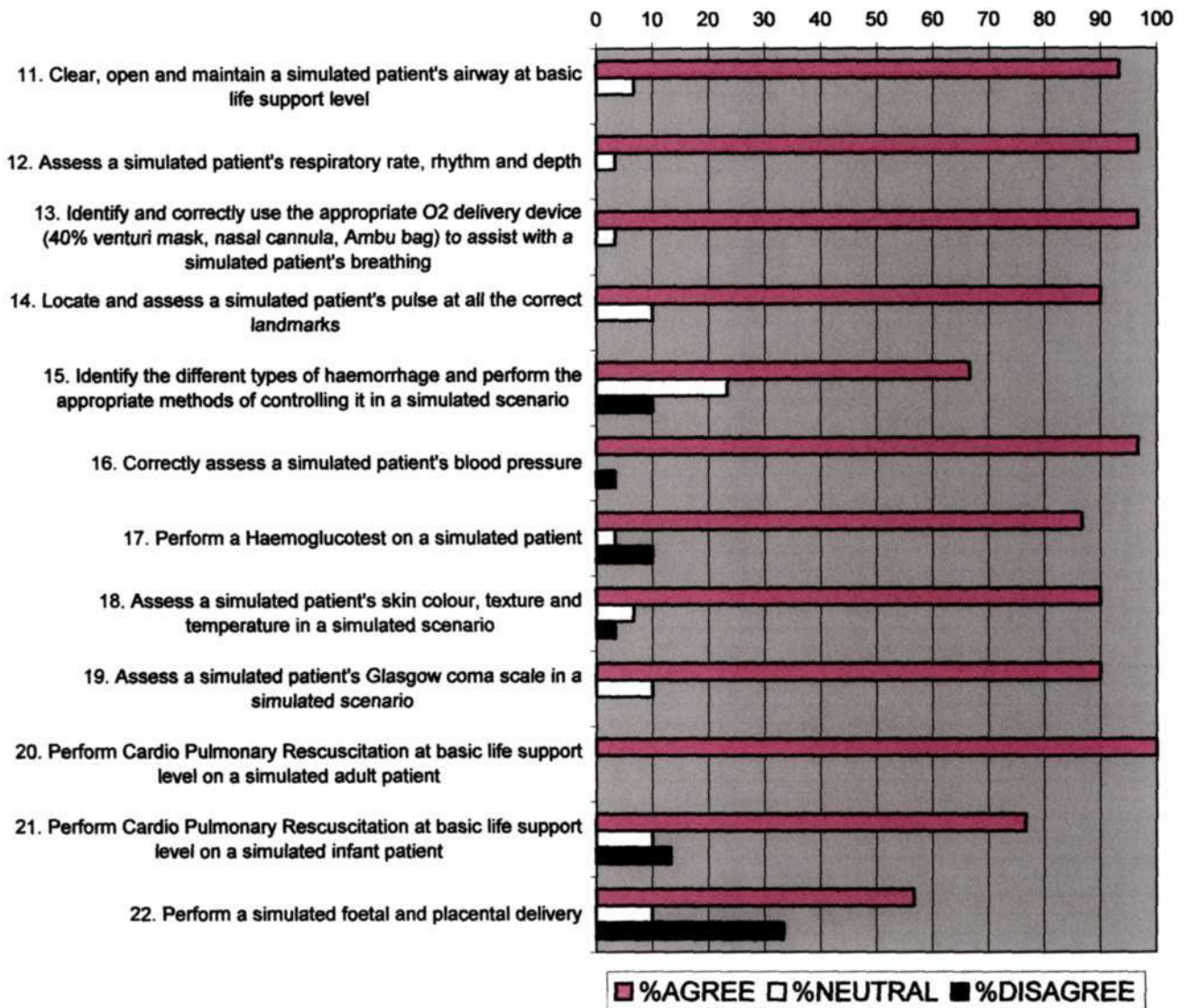
the teaching method was satisfactory. Here the PBL approach was used. Interestingly, it seems like the traditional format was preferred. The researcher also believes that since she was the only person giving the lectures to the 5<sup>th</sup> years, whereas the 3<sup>rd</sup> year groups were tutored by the other staff members of the Skills Lab, there appears to be a bias towards her. She believes that the 5<sup>th</sup> years feel a sense of gratitude towards her, since she has taught them other emergency skills during the Anaesthetic and Paediatric Blocks this year. These skills extend beyond the scope of the ECP (B) Course.

Seventy-three percent of the 5<sup>th</sup> years are more confident with their medical management of real patients in comparison to 57% of the 3<sup>rd</sup> years. (Q9). I believe that the 3<sup>rd</sup> years have not had sufficient exposure to real patients and therefore cannot make this assessment. Both groups of students felt that the Course was a rewarding learning experience (Q10).

4.1.5. 3<sup>RD</sup> YEAR RESPONSES TO THE CLINICAL SKILLS LEARNT DURING THE ECP (B) COURSE ON MODELS AND/OR SIMULATED PATIENTS (*APPENDIX I, PART B*)



4.1.6. 5<sup>TH</sup> YEAR RESPONSES TO THE CLINICAL SKILLS LEARNT DURING THE ECP (B) COURSE ON THE MODELS AND/OR SIMULATED PATIENT (APPENDIX 1, PART B)



**4.1.7. TABLE 3: COMPARISON BETWEEN 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR RESPONSES TO THE CLINICAL SKILLS LEARNT DURING THE ECP (B) COURSE ON MODELS AND/OR SIMULATED PATIENTS (APPENDIX 1, PART B)**

	3rd Yr % AGREE	5th Yr % AGREE	3rd Yr % NEUTRAL	5th Yr % NEUTRAL	3rd Yr % DISAGREE	5th Yr % DISAGREE
11. Clear, open and maintain a simulated patient's airway at basic life support level	90	93	0	7	10	0
12. Assess a simulated patient's respiratory rate, rhythm and depth	97	97	0	3	3	0
13. Identify and correctly use the appropriate O2 delivery device (40% venturi mask, nasal cannula, Ambu bag) to assist with a simulated patient's breathing	90	97	0	3	10	0
14. Locate and assess a simulated patient's pulse at all the correct landmarks	87	90	7	10	7	0
15. Identify the different types of haemorrhage and perform the appropriate methods of controlling it in a simulated scenario	77	67	7	23	17	10
16. Correctly assess a simulated patient's blood pressure	93	97	0	0	7	3
17. Perform a Haemogluco test on a simulated patient	93	87	0	3	7	10
18. Assess a simulated patient's skin colour, texture and temperature in a simulated scenario	83	90	7	7	10	3
19. Assess a simulated patient's Glasgow coma scale in a simulated scenario	80	90	7	10	13	0
20. Perform Cardio Pulmonary Resuscitation at basic life support level on a simulated adult patient	97	100	0	0	3	0
21. Perform Cardio Pulmonary Resuscitation at basic life support level on a simulated infant patient	97	77	0	10	3	13
22. Perform a simulated foetal and placental delivery	41	57	7	10	52	33

**4.1.8. COMPARISON BETWEEN THE 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR RESPONSES TO THE CLINICAL SKILLS LEARNT DURING THE ECP (B) COURSE ON MODELS AND/OR SIMULATED PATIENTS. (TABLE 3, Page 42).**

Both groups of students were able to clear, open and maintain a simulated patient's airways, assess the breathing, identify the appropriate oxygen delivery devices and locate the correct landmarks for the pulses of a simulated patient. (Q11, Q12, Q13, Q14). The researcher believes that this is due to the adequate demonstrations of these skills as well as the time that was allowed for students to practise the skills on the models and/ or simulated patients.

Seventy seven percent of the 3<sup>rd</sup> years felt that they were able to identify the different types of haemorrhage and control it in a simulated scenario whereas sixty seven percent of the 5<sup>th</sup> years felt the same (Q15). This is due to the fact that the 3<sup>rd</sup> years were given different

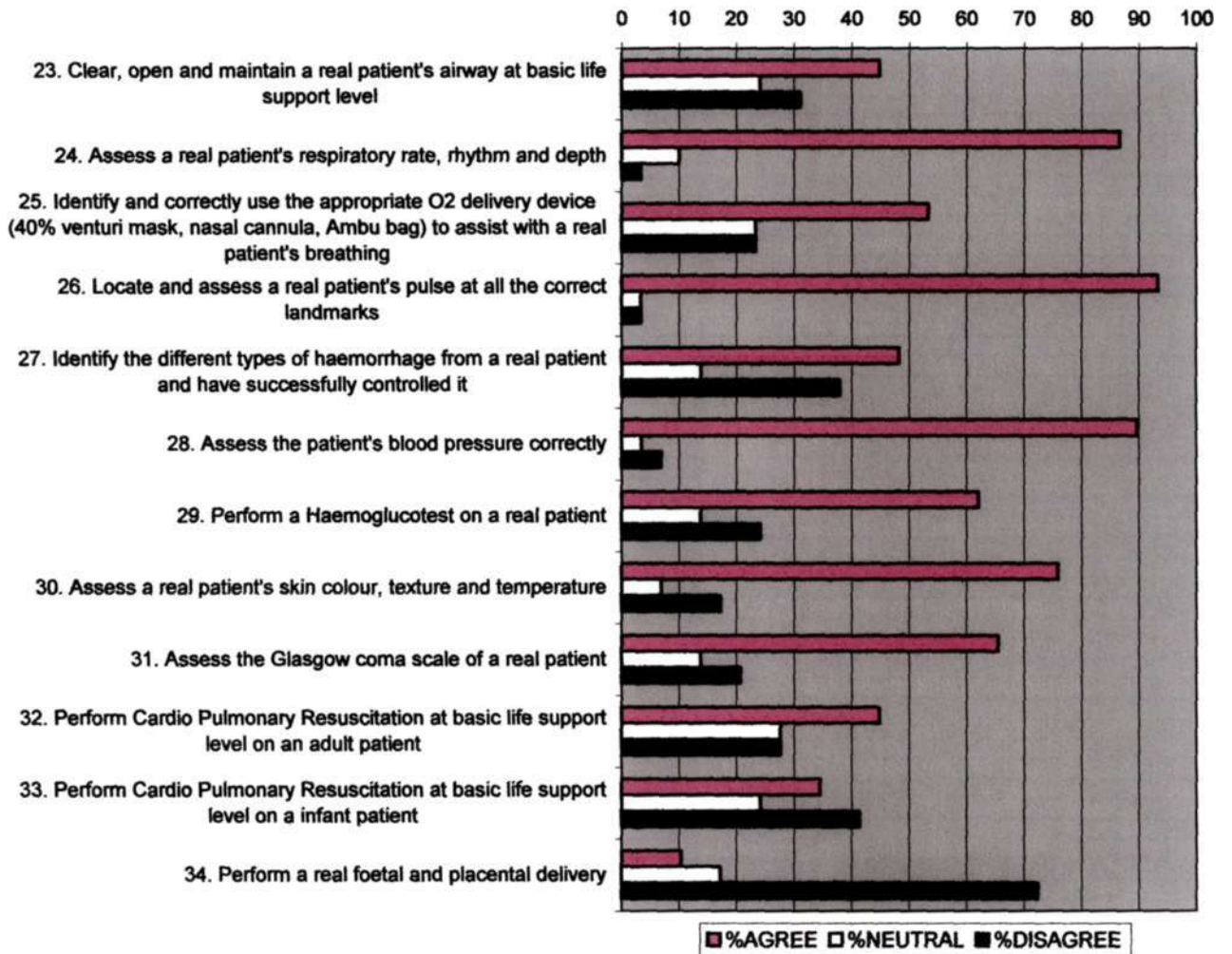
scenarios of patient simulations throughout the entire year whereas the 5<sup>th</sup> years were given patient simulation scenarios only during the 3 weeks of the course.

Both groups of students were adequately able to assess a simulated patient's blood pressure, haemoglucotest and skin colour and temperature (Q16, Q17, Q18, Q19) It is essential for the students to be 100% competent at some of the skills that are included in the assessment, i.e. OSCE (Objective Structured Clinical Examination). Assessment drives learning, and the students are expected to perform these skills in 3 minutes during the OSCE, whilst the examiner observes and rates them on a checklist.

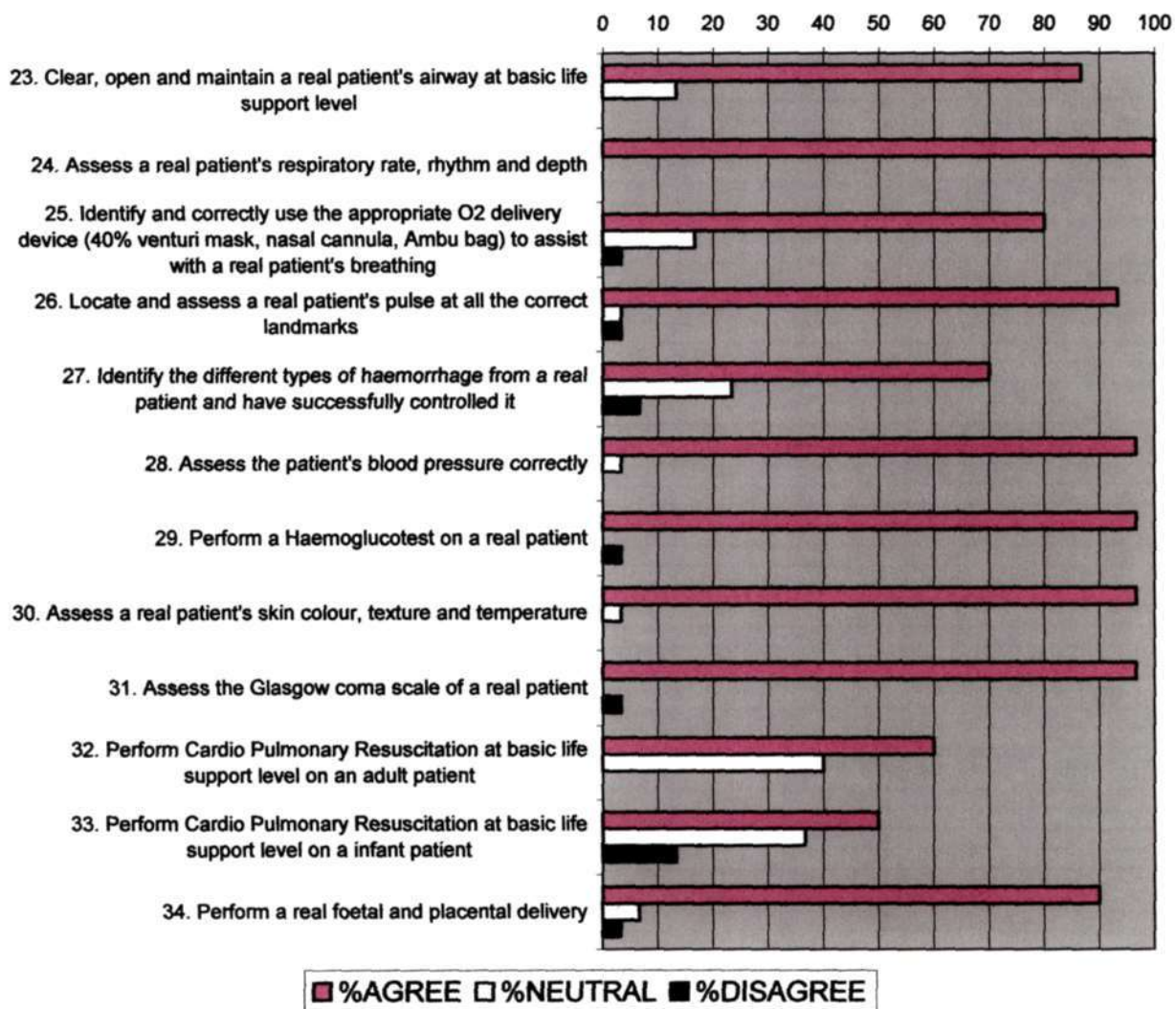
Both groups were also able to perform Cardio Pulmonary Resuscitation on an adult model (Q20). Ninety seven percent of the 3<sup>rd</sup> years felt that they were able to perform CPR on an infant model whereas only 77% of the 5<sup>th</sup> years felt the same (Q21). This is also due to the 3<sup>rd</sup> years having the entire year to practise these skills whilst the 5<sup>th</sup> years only had 3 weeks to practise CPR on the infant model.

Forty one percent of the 3<sup>rd</sup> years felt adequate at performing a simulated foetal and placental delivery whereas fifty seven percent of 5<sup>th</sup> years felt the same. Although the Skills Lab is equipped with Obstetric Phantoms/Doll and pelvis, i.e. models that can simulate the childbirth process, it is not as realistic as the real delivery of a baby. The childbirth process has to be manually demonstrated using these models, taking away the realism of the procedure, i.e. the demonstrator has to physically push the foetus through the birth canal to demonstrate the childbirth process. Therefore students are not able to perceive this as a reality. Also, the 3<sup>rd</sup> years were only taught this skill during Theme 1.5, i.e. during September/October. They therefore did not have sufficient time in the year to practise. The 5<sup>th</sup> years also had insufficient time during the course to practise the simulated delivery of a foetus and placenta with the models in the Skills Lab. In general, most of the skills have been learnt during the ECP (B) Course on models and/or simulated patients by both the 3<sup>rd</sup> and 5<sup>th</sup> year students; except for the simulated foetal and placental delivery.

4.1.9. 3<sup>RD</sup> YEAR RESPONSES TO THE CLINICAL SKILLS APPLIED ON REAL PATIENTS IN THE HOSPITAL SETTING (APPENDIX 1, PART C)



4.1.10. 5<sup>TH</sup> YEAR RESPONSES TO THE CLINICAL SKILLS APPLIED ON REAL PATIENTS IN THE HOSPITAL SETTING (APPENDIX 1, PART C)



4.1.11. TABLE 4: COMPARISON BETWEEN 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR RESPONSES TO THE CLINICAL SKILLS APPLIED ON REAL PATIENTS IN THE HOSPITAL SETTING (*APPENDIX 1, PART C*)

	3rd Yr %AGREE	5th Yr %AGREE	3rd Yr %NEUTRAL	5th Yr %NEUTRAL	3rd Yr %DISAGREE	5th Yr %DISAGREE
23. Clear, open and maintain a real patient's airway at basic life support level	45	87	24	13	31	0
24. Assess a real patient's respiratory rate, rhythm and depth	87	100	10	0	3	0
25. Identify and correctly use the appropriate O2 delivery device (40% venturi mask, nasal cannula, Ambu bag) to assist with a real patient's breathing	53	80	23	17	23	3
26. Locate and assess a real patient's pulse at all the correct landmarks	93	93	3	3	3	3
27. Identify the different types of haemorrhage from a real patient and have successfully controlled it	48	70	14	23	38	7
28. Assess the patient's blood pressure correctly	90	97	3	3	7	0
29. Perform a Haemoglucotest on a real patient	62	97	14	0	24	3
30. Assess a real patient's skin colour, texture and temperature	76	97	7	3	17	0
31. Assess the Glasgow coma scale of a real patient	66	97	14	0	21	3
32. Perform Cardio Pulmonary Resuscitation at basic life support level on an adult patient	45	60	28	40	28	0
33. Perform Cardio Pulmonary Resuscitation at basic life support level on an infant patient	34	50	24	37	41	13
34. Perform a real foetal and placental delivery	10	90	17	7	72	3

4.1.12. COMPARISON BETWEEN 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR RESPONSES TO THE CLINICAL SKILLS APPLIED ON REAL PATIENTS IN THE HOSPITAL SETTING (*TABLE 4, Page 46*)

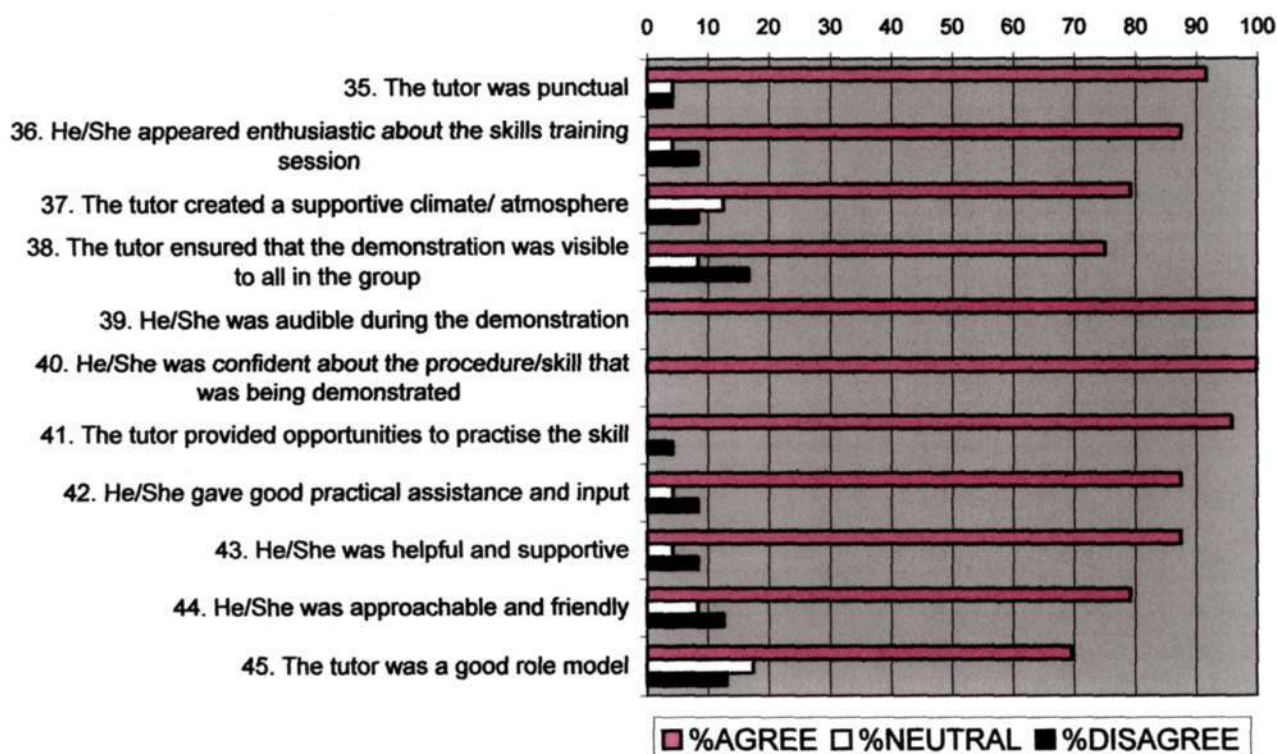
From the comparison of the application of the clinical skills on real patients (Table 3), it is clear that the 5<sup>th</sup> year students have performed most of them on real patients (Q23 to Q31). CPR on an adult patient and infant patient has, however, not frequently been performed. The rationale behind this is that the 5<sup>th</sup> year students perform 'Intake duties' after hours at King Edward Hospital and are faced with various emergency situations. Whereas the 3<sup>rd</sup> years have just begun these sessions and have not been exposed to as many 'emergency situations' as the 5<sup>th</sup> years. Therefore they were not able to utilise their skills on real patients. Performing CPR on both adult and infant patients is a grave emergency and normally handled by the senior medical staff (Q32 and Q33). Students are very rarely given an opportunity to perform resuscitation on these patients. Therefore both groups of students

have stated that they have not really been performing these procedures on real patients or that they were not allowed to perform these skills on real patients.

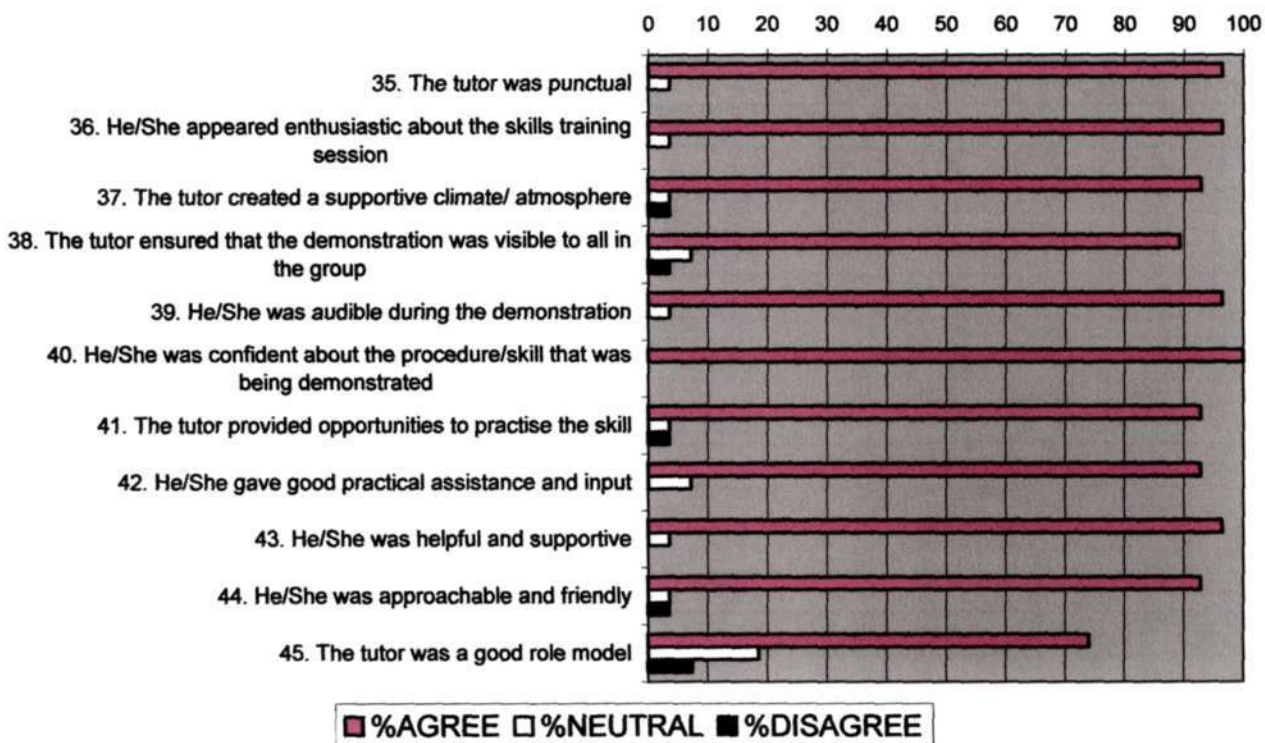
Ninety-three percent of the 5<sup>th</sup> years have performed a real foetal and placental delivery because they undertake an Obstetric and Gynaecology block of six weeks duration in both 4<sup>th</sup> and 5<sup>th</sup> years in the Traditional Curriculum (Q34). They have therefore spent many hours in the Labour wards performing deliveries, whereas the 3<sup>rd</sup> years have only spent a few weeks in their first year during the Reproductive Health Theme in the Labour wards. Minimal time is spent during their 3<sup>rd</sup> year, during the Reproductive Health II Theme. Therefore they have not had sufficient time to perform real deliveries.

From the data, it is clear that the 3<sup>rd</sup> years have not been exposed sufficiently to real patients and were thus not given the opportunity of performing the skills learnt during the ECP (B) Course on real patients in the clinical setting whereas all the skills except for CPR on an adult and infant patient have been performed by the 5<sup>th</sup> years on real patients.

#### 4.1.13. 3<sup>RD</sup> YEAR RESPONSES TO THE EVALUATION OF THE EMERGENCY SKILLS TUTOR (LAB-BASED) (APPENDIX 1, PART D)



4.1.14. 5<sup>TH</sup> YEAR RESPONSES TO THE EVALUATION OF THE EMERGENCY SKILLS TUTOR (LAB-BASED) (APPENDIX 1, PART D)



4.1.15. TABLE 5: COMPARISON BETWEEN 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR RESPONSES TO THE EVALUATION OF THE EMERGENCY SKILLS TUTOR (LAB-BASED) (APPENDIX 1, PART D)

	3rd Yr %AGREE	5th Yr %AGREE	3rd Yr %NEUTRAL	5th Yr %NEUTRAL	3rd Yr %DISAGREE	5th Yr %DISAGREE
35. The tutor was punctual	92	96	4	4	4	0
36. He/She appeared enthusiastic about the skills training session	88	96	4	4	8	0
37. The tutor created a supportive climate/ atmosphere	79	93	13	4	8	4
38. The tutor ensured that the demonstration was visible to all in the group	75	89	8	7	17	4
39. He/She was audible during the demonstration	100	96	0	4	0	0
40. He/She was confident about the procedure/skill that was being demonstrated	100	100	0	0	0	0
41. The tutor provided opportunities to practise the skill	96	93	0	4	4	4
42. He/She gave good practical assistance and input	88	93	4	7	8	0
43. He/She was helpful and supportive	88	96	4	4	8	0
44. He/She was approachable and friendly	79	93	8	4	13	4
45. The tutor was a good role model	70	74	17	19	13	7

**4.1.16. COMPARISON BETWEEN 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR RESPONSES TO THE EVALUATION OF THE EMERGENCY SKILLS TUTOR (LAB-BASED) (TABLE 5, Page 48)**

All the 5<sup>th</sup> year students were tutored by myself during the ECP (B) Course in their first year, and the 3<sup>rd</sup> year students were tutored by both, Ms N Houston and the researcher. From the data, it can be seen that both the groups agreed that the tutor was punctual (Q35), and enthusiastic about the skills sessions (Q36).

Ninety-three percent of the fifth years felt that their tutor created a supportive atmosphere whereas seventy-nine percent of 3<sup>rd</sup> years felt the same (Q32). This may be as a result of the researcher being the 5<sup>th</sup> years' only tutor and having contact with them everyday for three weeks, whereas with the 3<sup>rd</sup> years, the groups were split between Ms Houston and the researcher. The students were tutored for one hour every week. In this way not much of a bond was created.

Eighty-nine percent of the 5<sup>th</sup> years felt that the demonstrations were clearly visible to all members of the group, whilst seventy-five percent of the 3<sup>rd</sup> years felt the same (Q38). The 5<sup>th</sup> years were taught their skills in groups of fifty, and since the researcher was the only tutor, she had to divide the students into 5 groups of 10 students and go around to each of the groups and perform the demonstration until everyone saw the skill being performed. This was extremely tiring for the researcher, but obviously, the students benefited from this repetition of the skill in smaller groups. The 3<sup>rd</sup> year students attended skills sessions in groups of 40. 20 students were allocated to Ms Houston and the other 20 were allocated to the researcher. From the data, it becomes clear that twenty is too big a number. This issue will be discussed in the recommendation chapter.

Both groups agreed that the tutors were both audible and confident about the procedure/skill that was being demonstrated (Q39, Q40). Ms Houston and the researcher are both Advanced Life Support Paramedics with an Educational background as well as clinical experience. They are constantly endeavouring to improve their own professional skills by attending CPR workshops, etc. Both tutors are therefore confidently and competently able to demonstrate all the skills required for the ECP (B) Course. With regard to providing

opportunities to practise, giving practical assistance and being helpful and supportive (Q41, Q42, Q43) both groups agreed that the tutors provided them with the above.

Ninety-three percent of the 5<sup>th</sup> years stated that the tutor was friendly and approachable (Q44) whereas seventy nine percent stated the same of their tutor. Here again, at the time when the researcher taught the Course to the 5<sup>th</sup> years, they were the only group of students that she was teaching for the full duration of the Course. Regarding the tutoring of the 3<sup>rd</sup> years, Ms Houston and the researcher had the other cohorts of students to teach (with the introduction of the PBL Curriculum, skills are taught to 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> years). Therefore the times had to be shared equally with all cohorts of students.

From the data, it can be seen that the students were generally pleased with the tutors' ability to teach the ECP (B) Course in both the PBL and Traditional formats.

**4.2. RESPONSES TO THE OPEN-ENDED QUESTIONS (APPENDIX 1, PART B1, C1, D1, E46, E47)**

**THE OPEN-ENDED QUESTIONS**

The questionnaire consisted of five open-ended questions. A coding system was derived to categorise the responses. Each of the questions were looked at and the responses were coded accordingly. Thereafter the comments were divided into either positive or negative statements.

Parts B1, C1 and D1 of the questionnaire provided the students with an opportunity to make additional comments/ suggestions about any of the points/ issues raised in the corresponding parts B, C and D.

An analysis of these comments/ suggestions using the coding system will also be provided.

**4.2.1. TABLE 6: COMMENT ANALYSIS PER QUESTION – ALL THE OPEN-ENDED QUESTIONS**

	Year 3					Year 5				
	n	No. of comments received	% comments received on statement	% positive comments	% negative comments	n	No. of comments received	% comments received on statement	% positive comments	% negative comments
<b>B1 - COMMENTS ON SKILLS LEARNT IN LAB</b>	30	6	<b>20.00</b>	33.33	66.67	30	5	<b>16.67</b>	60.00	80.00
<b>C1 - COMMENTS/ SUGGESTIONS ON SKILLS APPLIED ON REAL PATIENTS</b>	30	4	<b>13.33</b>	0.00	100.00	30	6	<b>20.00</b>	50.00	83.33
<b>D1 - COMMENTS/SUGGESTIONS ON THE EMERGENCY SKILLS TUTOR</b>	30	5	<b>16.67</b>	20.00	80.00	30	8	<b>26.67</b>	100.00	62.50
<b>E46 - COMMENT ON IMPACT OF ECP (B) COURSE ON CLINICAL PRACTICE</b>	30	19	<b>63.33</b>	84.21	10.53	30	28	<b>93.33</b>	89.29	11.11
<b>E47 - COMMENTS/SUGGESTIONS ON ECP (B) COURSE</b>	30	9	<b>30.00</b>	11.11	88.89	30	20	<b>66.67</b>	20.00	80.00

4.2.2. TABLE 7: COMMENT ANALYSIS PER CODING - QUESTION B1 –  
COMMENTS ON SKILLS LEARNT IN LAB

QUESTIONS AND CODING	Year 3			Year 5		
	No. of comments received	% positive comments	% negative comments	No. of comments received	% positive comments	% negative comments
<b>B1 - COMMENTS ON SKILLS LEARNT IN LAB</b>						
D = Duration of course	2	0	100	2	0	100
E = Learning experience	2	100	0	2	100	0
A = Application of knowledge	1	100	0	3	67	33
C = Communication between Lab and Ward staff	1	0	100	0		
T = Time between Lab and real situation	1	0	100	1	0	100
Con = Confidence to perform skill	0			1	100	0
Com = Competence of execution of skill	0			1	100	0
En = Environmental factors including equipment	0			1	0	100
AS = Assessment	0			0		
WT = Ward time - time spent with real patient	0			0		
ECT = Emergency Care Tutor	0			0		
CM = Course Material	0			0		
CD = Course Design	0			1	100	0
CT = Course Content	0			0		
R = Revision of skills	0			0		

For the direct quotations, please refer to Appendix 3B, TABLE 12

4.2.3. 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR RESPONSES ON CLINICAL SKILLS LEARNT DURING THE ECP (B) COURSE ON MODELS AND/OR SIMULATED PATIENTS IN THE SKILLS LAB (APPENDIX 1, PART B1)

TABLE 7, Page 52 and APPENDIX 3B, TABLE 12

- Duration of Course

Generally, the 3<sup>rd</sup> years felt that the Course being spread through the entire year was too long whereas the 5<sup>th</sup> years felt that the 3-week module was too short, and that the Course should be integrated into the other years of study in their curriculum. The duration of the Course will be discussed in Part E47 of this chapter.

- Learning Experience

Both the 3<sup>rd</sup> Years and the 5<sup>th</sup> years stated that their time spent in the Skills Lab “*was a worthwhile and exciting experience*”. They went on to say that the skills learnt in the

Lab, “gave them an approach in dealing with real life situations”. A direct quote from a fifth year student stated, *“The course was a great help. It really gave us a good start.”*

◆ Application of knowledge

Both groups commented that they were able to apply the skills learnt in the Lab on real patients. A third year student stated that, *“... it gave me a chance to apply all that I had learnt in the classroom to a real situation.”* One of the 5<sup>th</sup> year students stated that, *“... it helped but it is very different in real life with real patients.”* Although we try to simulate real-life scenarios on the models in the Skills Lab, it is very difficult to create a scenario that has all the dynamics of the real situation. The stress of the family members and the seriousness of a life and death situation are sometimes impossible to create in the classroom. With the use of moulage (make-up) kits and simulated blood, etc, a clever representation of real-life scenarios are prepared for students.

◆ Communication between Lab and Ward staff

The 3<sup>rd</sup> year students felt that there should be better communication between the Skills Lab staff and the Tutors in the wards. It was stated that, *“...need to interact more with the consultants because our methods were not always up to scratch with what they expect of us – its not that we've forgotten what we learnt, some of what we learnt wasn't what was being done in the wards”.* There seems to be a lack of communication between the ward tutors and the tutors in the Skills Lab. The Skills Lab staff are guided by skills protocols that are drawn up by the Health Professions Council of South Africa. These are nationally standardised guidelines that get updated regularly. Presently, there is no mechanism in place to ensure that what is being taught in the Skills Lab meets the exact requirements for the performance of these skills on real patients in the wards. Ideally, a workshop should be held with both the Lab tutors and the hospital tutors to ensure that all skills are standardised.

◆ Time between the Skills Lab and the real situation

Both groups of students expressed the need to be able to practise the skills learnt in the Lab immediately in the real situation. A direct quote from a 3<sup>rd</sup> year student states, *“it would be easier to go to the hospital and observe/ do the skills in first year instead of waiting for third year.”* A 5<sup>th</sup> year student stated that, *“...it should be done hand in hand with the real*

*scenario.*” The 3<sup>rd</sup> year students were only able to perform the skills learnt in the Lab during their Clinical Methods Course that is a component of the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> year programmes. Due to timetable constraints, the 3<sup>rd</sup> year students only spend two, two-hour sessions in the wards. This time is inadequate for all the students to be exposed to patient care in the real scenario. The 5<sup>th</sup> year students who did the course in their first year were only able to put them into practice in their 4<sup>th</sup> year of study. This was due to the traditional design of the Curriculum.

◆ Confidence and Competence to perform the skill

The 5<sup>th</sup> years stated, “...*gives you a good clinical grounding and improves confidence and competence.*” From this, it is clear that skills learnt during the ECP (B) Course on models and/ or simulated patients in the Skills Lab prepares the students for their encounters with real patients. They are able to practise the skills on the models and gain a sense of confidence and competence before executing them on real patients. The ethical issue of practising on real patients should also be considered. Previously, students were shown the procedures once on a real patient prior to them being required to perform it by themselves on these patients.

◆ Environmental factors including equipment

There was only one response from a 5<sup>th</sup> year student who stated, “*There was an overcrowding of students during practise of skills. Need more space to perform and practise all these skills.*” The 3<sup>rd</sup> year students were taught skills in groups of forty and were further divided into two groups of 20 with one group being allocated to Ms Houston and the other group to myself. The 5<sup>th</sup> years were taught in groups of fifty at a time and skills were taught by myself. Thus the concern expressed by the student that the Lab was overcrowded. This issue will be discussed further in the Recommendations Chapter.

◆ Course design

The 5<sup>th</sup> years expressed a need for the course to be integrated into more of the years of the programme. This issue will be included in the discussion of the ECP (B) Course in part E47.

## SUMMARY

Emergency skills are taught in a systematic manner, highlighting to the students a step-by-step guide to approaching any/all emergency situations. At first, individual skills are taught and perfected on the models and/ or simulated patients and later combined to form a complete patient assessment. All scenarios are created to prepare the student for management of the real patient in the emergency context. The Likert Scale results also show that all the skills were learnt during the ECP (B) Course by both groups of students except for foetal and placental delivery. Identification of the different types of haemorrhage and its management also seemed to be a problem. As was stated earlier, these skills are difficult to simulate in the Lab setting. Students were therefore not able to completely achieve competence in these areas.

4.2.4. TABLE 8: COMMENT ANALYSIS PER CODING QUESTIONS C1 – COMMENTS/SUGGESTIONS ON SKILLS APPLIED ON REAL PATIENTS

QUESTIONS AND CODING	Year 3			Year 5		
	No. of comments received	% positive comments	% negative comments	No. of comments received	% positive comments	% negative comments
<b>C1 - COMMENTS/ SUGGESTIONS ON SKILLS APPLIED ON REAL PATIENTS</b>						
D = Duration of course	0			0		
E = Learning experience	0			2	50	50
A = Application of knowledge	0			2	50	50
C = Communication between Lab and Ward staff	0			0		
T = Time between Lab and real situation	3	0	100	0		
Con = Confidence to perform skill	0			1	100	0
Com = Competence of execution of skill	0			1	100	0
En = Environmental factors including equipment	0			0		
AS = Assessment	1	0	100	0		
WT = Ward time - time spent with real patient	0			3	0	100
ECT = Emergency Care Tutor	0			0		
CM = Course Material	0			0		
CD = Course Design	0			0		
CT = Course Content	1	0	100	0		
R = Revision of skills	0			0		

For the direct quotations, please refer to Appendix 3B, Table 13

## 4.2.5. 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR RESPONSES ON THE CLINICAL SKILLS APPLIED ON REAL PATIENTS IN THE HOSPITAL SETTING (APPENDIX 1, PART C1)

TABLE 8, Page 55 and APPENDIX 3B, TABLE 13

#### ◆ Learning Experience

There were no comments from the 3<sup>rd</sup> years in this regard. The 5<sup>th</sup> years, however, stated that their clinical experience with real patients was more beneficial since it was easier to pick up vital signs from a real patient than from a model. A direct quote states, *“Not realistic on a dummy.”*

#### ◆ Application of knowledge

A statement from another 5<sup>th</sup> year student directly contradicts the statement above in the context of *“Learning experience,”* by stating, *“Because one had practised from dummies, its easy to approach a real patient.”* At the Skills Lab, we try to build on a foundation, i.e. skills training is built on a longitudinal plane, where at first we teach the skill on a model, then progress to a simulated patient and finally when the student is completely confident and competent at the skill, on the real patient.

#### ◆ Time between Lab and real situation

Here again, the 3<sup>rd</sup> years emphasised that there is too long a delay between the time that the skills are learnt in the Skills Lab to when they are exposed to the real situation in order to apply these skills on real patients. A direct quote states, *“By the time we get to the wards, we’ve forgotten what we learnt or else we haven’t been exposed to things. Maybe after learning on dummies more emphasis should be placed on real-life scenarios.”* Another 3<sup>rd</sup> year student commented that *“Most of the skills I learned in 1<sup>st</sup> year, I have not had the opportunity to perform.”* From these comments, it is obvious that there is too much of a time elapse between when the skills are taught in the Skills Lab to when the students are given an opportunity (if at all) to apply them on real patients.

#### ◆ Confidence and Competence of Execution of skill

There were no comments from the 3<sup>rd</sup> years, however the 5<sup>th</sup> years felt that they were more confident to perform skills on real patients after being taught in the Lab. This can be seen from the following comments, *“I am now confident to handle patients in the ward.”* and *“Because one had practised from dummies, its easy to approach real patients.”* Practising

skills in a 'safe' environment builds students confidence because they are able to practise the same skill over and over again on the model without 'it' complaining.

◆ Ward time, i.e. time spent with real patients

The 3<sup>rd</sup> years did not comment, but from the following comments from the 5<sup>th</sup> years, it can be seen that more time needs to be allocated for students to spend with real patients in the clinical setting. Direct quotes state, *"There is limited exposure at times in the wards."* and *"KEH, more health caregivers – thus deprive students to perform some of the techniques."* With the downsizing of King Edward Hospital, the number of patients admitted to the wards has drastically decreased. With the increase of students, i.e. Medical and other Health Science students, there is competition to gain time and exposure with patients. Students therefore have limited hours in the wards and fewer patients to assess. This problem is presently being investigated by the Faculty Executive.

◆ Course design

One 3<sup>rd</sup> year student commented that *"Maybe after learning on dummies, more emphasis should be placed on real-life scenarios."* The Course is designed in such a way that the patient scenarios are made to be based on real-life scenarios. It may be an idea, however, to bring in real patients from the casualty set up and treat these patients in front of the students. Only mildly injured patients can be exposed to this type of training. Due to life-threatening injuries being emergencies and should be dealt with in the appropriate facilities.

## SUMMARY

Generally, both cohorts of students commented that there was a significant time delay in their programme that prevented them from immediately applying their knowledge obtained in the Skills Lab on real patients. There also seems to be a limited number of patients on whom the skills can be applied. As a result, the students are suggesting that the Lab teaching should be more realistic with a lot more emphasis being placed on simulated patients and not just models. These comments correspond with the Likert Scale results in that the results show that the 3<sup>rd</sup> years have not really been performing/applying their skills on real patients. Example, only 10% of 3<sup>rd</sup> years performed a real foetal and placental delivery. This issue will be discussed further in the Recommendations Chapter.

4.2.6. TABLE 9: COMMENT ANALYSIS PER CODING QUESTIONS - D1 - COMMENTS/SUGGESTIONS ON EMERGENCY SKILLS TUTOR

QUESTIONS AND CODING	Year 3			Year 5		
	No. of comments received	% positive comments	% negative comments	No. of comments received	% positive comments	% negative comments
<b>D1 - COMMENTS/SUGGESTIONS ON THE EMERGENCY SKILLS TUTOR</b>						
D = Duration of course	2	0	100	1	0	100
E = Learning experience	0			1	100	0
A = Application of knowledge	0			0		
C = Communication between Lab and Ward staff	0			0		
T = Time between Lab and real situation	0			1	0	100
Con = Confidence to perform skill	0			0		
Com = Competence of execution of skill	0			0		
En = Environmental factors including equipment	0			1	0	100
AS = Assessment	1	0	100	0		
WT = Ward time - time spent with real patient	0			0		
ECT = Emergency Care Tutor	2	50	50	6	100	0
CM = Course Material	0			1	0	100
CD = Course Design	0			3	25	75
CT = Course Content	0			0		
R = Revision of skills	0			1	100	0

For the direct quotations, please refer to Appendix 3B, Table 14

4.2.7. 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR COMMENTS/SUGGESTIONS ON THE EVALUATION OF THE EMERGENCY SKILLS TUTOR (LAB-BASED) (APPENDIX 1, PART D1)

TABLE 9, Page 58 and APPENDIX 3B - TABLE 14

Both Ms Houston and the researcher tutored the 3rd year students for the duration of the Course, i.e. the entire academic year (1<sup>st</sup> year) in 2001. The 5<sup>th</sup> year students were tutored by the researcher for the entire duration of the course, i.e. (3 weeks) during their first year of study in 2000.

◆ EMERGENCY CARE TUTOR

In the 3<sup>rd</sup> year class, 2 students commented about the Tutor. One student said that the tutor made the course interesting whilst the other said, that, *“We understand that it is very stressful to deal with over 200 students at one go but naturally it is to be expected and maybe there are better ways of dealing with the stress and snapping is not one of them.”*

The 5th year students had only positive comments about the Emergency Care Tutor. Direct quotations are *"The course was taught very well...."*, *"Was very helpful and always approachable."*, *"Please keep up the good work, everything is up to standard."*, *"Always helpful and willing to sacrifice her time for our learning. Very approachable. Made learning fun."*

Regarding the comment about the situation of 200 students being stressful to handle, from the researcher's own experience, she believes this to be true. To teach a class of 200 students in groups of 40 at a time, five times a week for the duration of the entire academic year, is physically demanding and mentally draining. It does become stressful and laborious to repeat the same skill five times a week so that all the students in the class have had the demonstrations. It is also difficult to maintain discipline among the students with regard to the care of the equipment, and it is therefore necessary to be firm with the students during the skills sessions. This may be perceived as 'snapping'. It also appears that a closer bond was formed with the 5<sup>th</sup> year students and their tutor.

## SUMMARY

It is very important for the Tutor to correctly and confidently demonstrate these life-saving skills to the students and at the same time be able to form a close bond with the students so that they would feel comfortable to practise in the simulated environment. From the data, both the Likert Scale results as well as the open-ended comments, it is evident that the Tutors in both the Traditional and PBL curricula were able to achieve this rapport with the students.

4.2.8. TABLE 10: COMMENT ANALYSIS PER CODING QUESTIONS E46 - COMMENTS ON IMPACT OF ECP (B) COURSE ON CLINICAL PRACTICE

QUESTIONS AND CODING	Year 3			Year 5		
	No. of comments received	% positive comments	% negative comments	No. of comments received	% positive comments	% negative comments
<b>E46 - COMMENT ON IMPACT OF ECP (B) COURSE ON CLINICAL PRACTICE</b>						
D = Duration of course	0			1	0	100
E = Learning experience	8	87	13	16	100	0
A = Application of knowledge	14	100	0	19	100	0
C = Communication between Lab and Ward staff	0			0		
T = Time between Lab and real situation	0			0		
Con = Confidence to perform skill	7	100	0	9	100	0
Com = Competence of execution of skill	3	100	0	7	100	0
En = Environmental factors including equipment	1	100	0	1	100	0
AS = Assessment	0			0		
WT = Ward time - time spent with real patient	1	0	100	0		
ECT = Emergency Care Tutor	0			0		
CM = Course Material	0			0		
CD = Course Design	0			0		
CT = Course Content	2	100	0	10	90	10
R = Revision of skills	0			0		

For the direct quotations, please refer to Appendix 3B, Table 15

4.2.9. 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR COMMENTS/SUGGESTIONS ON THE IMPACT OF THE ECP (B) COURSE ON THEIR CLINICAL PRACTICE (APPENDIX 1, PART E46)

TABLE 10, Page 60 and APPENDIX 3B, TABLE 15

◆ Duration of course

There were no comments from the 3<sup>rd</sup> year group, but one 5<sup>th</sup> year student stated, “Helps give you a grounding but we spent to little time doing it.” We have discussed earlier that the Course for the 5<sup>th</sup> years was only 3 weeks in duration in their first year of study. This will be discussed in part E47.

◆ Learning experience

The 3<sup>rd</sup> year students commented that the Course has definitely had a positive impact on their clinical practice. Some direct quotations from their comments were “ECP (B) Course

*has positively impacted on my clinical practice. When I'm doing my blocks I have an idea of what's expected of me and it makes my life in this medical field so much more easy.*", *"It had a great impact on my clinical practice. The skills I learnt I use often in hospital, especially as part of the general exam.*", *"The course helps us to understand patient care from the moment we see the patient and it helped a lot in understanding surgery and management.*", *"Excellent experience where I received my foundations/groundings to prepare/which has prepared me for clinical practice."*

The 5<sup>th</sup> year students also commented positively about the impact of the ECP (B) Course on their clinical practice. Some of the comments were *"It made initial clinical practice in the ward easier. It was good and beneficial to apply what we learnt.*", *"The Course allowed me to practise and understand some basic emergency skills that I have needed in the wards.*", *"Very beneficial. The only course that actually teaches clinical skills in the old curriculum."* From all the above comments it can be stated that there has been a positive impact on both the 3<sup>rd</sup> years' and 5<sup>th</sup> years' clinical practice.

#### ◆ Application of knowledge

Both the 3<sup>rd</sup> years and the 5<sup>th</sup> years stated that they were able to apply their knowledge that was gained during the ECP (B) Course on real patients. Some direct quotes from the 3<sup>rd</sup> years were as follows; *"It provided a good basis for our introduction to clinical methods at hospital.*", *"Makes the theoretical aspects of medicine more realistic.*", *"It has given me a proper approach to patients and emergency settings."*

Some of the 5<sup>th</sup> year comments were, *"All fitting into place now. Aided in Anaesthetics training. Helps you think on your feet."* *Most of the skills learnt were used in the wards.*", *"Very good. Still referred to the knowledge gained years after the course."*

From the above, it is evident that both groups of students were able to apply their knowledge gained on the ECP (B) Course, during their clinical practice. It is good to note that they were able to utilise their skills in the other fields of Medicine also, e.g. Anaesthetics.

#### ◆ Confidence and Competence to perform skill

Both the 3<sup>rd</sup> years and 5<sup>th</sup> years felt that the ECP (B) Course helped them gain confidence and competence at performing clinical skills on real patients. This can be seen from the following comments; *"..the moment I go to the hospital over holidays, I felt confident whenever I'm asked to perform a procedure."*, *"It was great. Gave me a sense of what was to come and a sense of being confident in handling emergencies."* Some of the 5<sup>th</sup> year comments were, *"It taught me how to react in an emergency situation, It helped me attain a certain level of confidence and competence."*, *"It has improved my competence and therefore my confidence in emergency care. I have a clear approach to emergency situations especially in theatre and in the environment outside Medical School."*

Learning the skills in a 'safe' environment with models has helped boost the students' confidence and by practising the skills until perfection in a 'non-threatening' environment helped them gain a level of competence at the skill. In becoming more confident and competent the students were then able to put these skills into practice in the real life situation. This can also be seen in their comments about the environmental factors including equipment. They also felt a sense of comfort in dealing with the equipment.

They were able to work 'initially' with the equipment in the Skills Lab, before being exposed to it in the wards. All the technical aspects of the equipment like troubleshooting and assembling was done in the Lab during the Course. They were given the opportunity to familiarise themselves with all the equipment in a non-threatening environment. This also boosted their overall confidence and competence.

#### ◆ Course Content

This issue will be discussed in the next point – E47 – comments/ suggestions on the ECP (B) Course.

#### SUMMARY

The data clearly indicate that the ECP (B) Course has had a positive impact on both the PBL students and the Traditional students' clinical practice. It is clear that their learning experiences during the course were enjoyable and worthwhile. They were also able to apply

the knowledge obtained during the course on real patients when they had the opportunity to do so. In the Skills Lab, they were able to gain confidence in performing the procedures on models until they perfected their skills. They also become familiar with all the necessary resuscitation equipment before being faced with it in the ‘real setup’.

4.2.10. TABLE 11: COMMENT ANALYSIS PER CODING QUESTIONS E47 - COMMENTS/SUGGESTIONS ON ECP (B) COURSE

QUESTIONS AND CODING	Year 3			Year 5		
	No. of comments received	% positive comments	% negative comments	No. of comments received	% positive comments	% negative comments
<b>E47 - COMMENTS/SUGGESTIONS ON ECP (B) COURSE</b>						
D = Duration of course	3	33	67	2	100	0
E = Learning experience	2	100	0	4	100	0
A = Application of knowledge	0			1	100	0
C = Communication between Lab and Ward staff	0			0		
T = Time between Lab and real situation	1	0	100	3	0	100
Con = Confidence to perform skill	0			0		
Com = Competence of execution of skill	1	100	0	1	100	0
En = Environmental factors including equipment	1	0	100	3	0	100
AS = Assessment	2	0	100	0		
WT = Ward time - time spent with real patient	0			0		
ECT = Emergency Care Tutor	1	0	100	1	100	0
CM = Course Material	1	0	100	0		
CD = Course Design	0			8	25	75
CT = Course Content	0			5	40	60
R = Revision of skills	0			8	0	100

For the direct quotations, please refer to Appendix 3B, Table 16

#### 4.2.11. 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR COMMENTS/ SUGGESTIONS ABOUT THE ECP (B) COURSE (APPENDIX 1, PART E47)

TABLE 11, Page 63 and APPENDIX 3B, TABLE 16

##### ◆ Duration of Course

Generally, the 3<sup>rd</sup> year students felt that the duration of the Course was too long. This can be supported by the following statements by the 3<sup>rd</sup> years, “A year is too much, it is a waste of our valuable time.”, “It is too long, should not run throughout the whole year.” The 5<sup>th</sup> years on the other hand commented that the duration was too short, some comments were as follows, “Emergency Care should be continued throughout the Medical School.”,

*“...should be spread out over the years.....”, “...more time should be allocated to the course....”*

The 3<sup>rd</sup> years felt that the Course being integrated into the entire year was too long. The researcher is also of the opinion that the course being spread throughout the year is not very effective. First, because of the numbers, i.e. 200 students that are split into groups of 40 for skills sessions. The numbers are too large for the small group demonstrations. Also skills that are taught at the beginning of the year may be forgotten by the end of the year when the examinations are held. The researcher would like to believe that if the Course was run twice a year with 100 students to deal with at a time it would be easier for the Skills Lab staff and the students. This would also be in line with the University's semester policy. One group of students would register for the EPC (B) Course during the first semester whilst the other group would register for an Elective and vice versa for the second semester. Examinations would be conducted twice a year, i.e. at the end of the first semester and at the end of the year with two groups of 100 students each. Each skill session would have only 20 students. That would be an ideal split of 10 students per Tutor. The skills sessions would also be repeated 5 times per week in order for all the students to be taught the same skill in the week.

Regarding 5<sup>th</sup> year students, the Traditional programme will be phased out in 2006. At present there are about 30 students who are in their 4<sup>th</sup> year of the Traditional Curriculum.

◆ Learning experience and application of knowledge

Both groups commented positively about their learning experience, *“Job well done.”*, *“I think it's a brilliant course...”*, *“...important principles of emergency management is learnt and never, taught to us in the wards.”* They were also able to apply their skills learnt on the course in the real situation as discussed earlier.

◆ Time between Lab and real situation

The researcher believes that students should be allowed to perform the skills learnt in the Skills Lab as soon as possible on real patients so that they are able to follow through with the learning progression, i.e. skills performed on the model, skills performed on simulated patients, and finally skills performed on a real patient. Both the 3<sup>rd</sup> years and 5<sup>th</sup> years stated the there was too long a delay between having learnt the skill in the Lab and when

they had the opportunity to perform the skill on a real patient. Some comments were as follows *"I would prefer to have had the opportunity to go and practise skills at the hospital while they were fresh in my mind in order for me to know if I really am competent or just comfortable with a simulated model."*, *"It would be easier to go to the hospital and observe/ do the skills in 1<sup>st</sup> year instead of waiting for 3<sup>rd</sup> year."*

From the above, it can clearly be seen that there is a substantial time delay between the Skills Lab and the real situation. Perhaps the curriculum organisers should be advised to make more time available from the first year of study for students to perform 'Intake' duties so that they will have an opportunity to put into practice the skills they have learnt in the Skills Lab.

◆ Environmental factors including equipment

The 5<sup>th</sup> years stated that the Skills Lab always seemed busy and that there was insufficient equipment and space for them to practise their skills. Some of their comments were as follows, *"Need more time for practising – Skills Lab always seems busy. Need more equipment for students to practise on."*, *"Smaller groups. More time to practise and a larger lab with more equipment."*

Timetable constraints, space and limited equipment is a major problem that the Skills Lab is experiencing. There are approximately one thousand students that are trained in the Skills Lab per year. Scheduled training is conducted with the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> year PBL Curriculum students, as well as 5<sup>th</sup> and 6<sup>th</sup> year Traditional Curriculum students and Postgraduate students. The Lab is open from 08h00 to 16h00 on weekdays and 08h00 to 14h00 on Saturdays. Due to these large student numbers, there is limited equipment and space that is available. Presently motivations are being submitted for more space and funding for the purchasing of more equipment.

◆ Assessment

The ECP (B) Course assessment comprises of five components, i.e. a theory paper, CPR, patient simulation, oral and OSCE. All five components were assessed at the end of the year over a three-day period in the PBL Curriculum.

The Traditional students were assessed on all five components at the end of the 3-week period over two days. With the PBL students, all 200 students were examined at the same

time, whereas the Traditional students were assessed in groups of 50. For both groups of students 20 examiners were present. The examiners were paired, creating 10 examination stations.

The 3<sup>rd</sup> years made some negative comments about the assessments saying that the examiners were intimidating and there was too much of pressure on them during the assessments. Some direct quotes were, *“In terms of examiners get people who will be on the level with all students, listen to what they have to say and not intimidate and make the whole exam atmosphere horrible. People who are considerate and passionate for their students work.”*, *“Exams should not be around the same time as course exams.”*, *“The exam time for 5 components was too short, there was too much pressure on me. Give a space between each of the components.”*

The Health Professions Council stipulates that in order to be an examiner for the ECP (B) Course, one has to be of a level higher in terms of the qualification, i.e. Intermediate Life Support Level or Advanced Life Support Level. Due to the large numbers of students, outside Paramedics were called in to be examiners. These Paramedics work at the Provincial Emergency Rescue Services that operates like a ‘paramilitary’ service. Therefore, they are ‘militant’ in nature. Emergency situations however, demand this type of seriousness and therefore the Paramedics tried to adopt this seriousness during the exam. It is obvious that the medical students do not appreciate this discipline-based atmosphere. An important issue during the assessment, however, was standardisation. This was ensured by the provision of standardised checklists, model answers, etc. The examiners were also briefed before the examinations. Regarding the time that was allocated for the assessments, only 3 days were available for the ECP (B) Course Exam due to the examination timetable restrictions, i.e. availability of exam venues, timetabling, etc.

#### ◆ Course design and Content

The ECP (B) Course content and design is specified by the Health Professions Council of S.A. How the Course is integrated into the MBChB Curriculum is determined by the Faculty. From the comments by both 3<sup>rd</sup> and 5<sup>th</sup> years, the content of the Course was relevant and beneficial. Direct quotes were *“It should be maintained and is important, as important principles of emergency management is learnt and never taught to us in wards.”*, *“I feel that it is a module which benefits the student greatly.”* *“It has taught us the*

*emergency resuscitation. protocol needed for us to be competent in the wards and the public.”*

The fifth year students suggested that other procedural skills like intravenous cannulation be taught as part of the course. Unfortunately, this procedure is not part of the content of the Course and thus was not taught during the three weeks. It was identified that these procedural skills needed to be perfected on models prior to the students being allowed to perform them on real patients. This was identified late within the Traditional Curriculum and as a result, these skills were only taught in 5<sup>th</sup> year. Students therefore suggested that it should be taught earlier on in the Programme. This can be seen by the following comment, *“As part of the old curriculum I was only taught I.V. cannulation in my 5<sup>th</sup> year after I had performed this skill by myself on many patients previously.”*, *“Certain skills like I.V. cannulation and venipuncture should be introduced before debut into the wards.”* In the PBL Curriculum, this problem is avoided since clinical skills training has been integrated from Year 1 of the curriculum and it is compulsory for students to learn these procedures on models first, prior to them performing them on real patients.

#### ◆ Revision of skills

The 5<sup>th</sup> years complained that the Course was run only in their first year of study and thereafter there was no revision of the skills. They suggested that refresher courses be run annually. Unfortunately, this was not possible in the Traditional Curriculum due to staff, time and space constraints. Certain skills were, however, identified and integrated into the different Blocks in the 5<sup>th</sup> and 6<sup>th</sup> year of the Traditional Curriculum. For example, neonatal resuscitation was taught during the Paediatric Block in 5<sup>th</sup> and 6<sup>th</sup> year. Advanced Life Support skills have been integrated into the Anaesthetic Block in 5<sup>th</sup> year and various Advanced Emergency Procedures have been integrated into the Family Medicine Block in 6<sup>th</sup> year.

These opportunities allow the students who are in the Traditional Curriculum to at least be exposed to emergency skills in the Skills Lab prior to them being expected to perform them on real patients once they qualify.

## **SUMMARY**

The duration of the Course was an issue with both groups of students. Therefore, the researcher will make a recommendation to the Faculty that the Course should be run twice in the year. One hundred students will register in the first semester and the other 100 students will register during the second semester.

Both groups of students said that they had positive learning experiences during the Course and they were able to apply the knowledge gained in the real situation. Due to timetable constraints and limited space and equipment it made revision of skills in the Lab difficult. This matter will be discussed in the Recommendations Chapter.

Regarding the assessments, Intermediate and/or Advanced Life Support Paramedics are carefully selected to be examiners. They are guided by checklists and model answers and are also given thorough instructions prior to the examination to ensure standardisation.

The Course content seemed adequate for first year level although students felt that other procedural skills should be integrated through the years. Skills that did not fall within the scope of practice of the ECP (B) Course were identified and integrated into the relevant modules in the Traditional Curriculum and into the relevant Themes in the PBL Curriculum. This ensured that students were exposed to all emergency procedures on models prior to being expected to perform them on real patients once they qualify.

## **B. INTERVIEWS**

The purpose of the interviews was to elicit the staffs' perceptions on the role of the ECP (B) Course in the MBChB Curriculum and its effects on the clinical ability of the Traditional students versus those of the PBL students. An interview schedule (Appendix 4) was compiled with the intention of conducting semi-structured interviews. Interviews were conducted with 5 Tutors who taught clinical skills in the Skills Lab and 5 Tutors who taught clinical skills in the Wards. The transcripts of the interviews have been attached (Appendix 5 and Appendix 6).

### **RESPONSES TO THE INTERVIEWS (*INTERVIEW SCHEDULE – APPENDIX 4*)**

#### **4.3. RESPONSES FROM THE LAB TUTORS**

##### **4.3.1. FAMILIARITY WITH THE ECP (B) COURSE AND THEIR PERCEPTIONS ON THE PRACTICAL CONTENTS**

All five interviewees were familiar with the Course because of their involvement with the Skills Lab. They all commented that the content of the Course was relevant and valuable to medical students. Some direct quotations were *"The content was well structured to the level of the student and very informative and valuable in the later years."* , *"... all these techniques they have been taught, the open airway manoeuvre, use of the mask and recording of pulses and recognition of shock are very relevant to their training in the Outpatient and Casualty Departments."* They also believed that the Course was an important component of the Curriculum.

##### **4.3.2. IMPACT ON THE STUDENTS' CLINICAL ABILITY**

All the interviewees stated that they felt that the Course would have a positive impact on the students' clinical ability. A direct quote states *"...it will have a great impact on the students' clinical ability. It will boost their confidence and make them able to deal with situations which otherwise could be pressurising, in a more clear headed way."* , *"...by practising emergency skills on simulated patients and on models, they gain this amount of confidence which does them a world of good when it comes to real patients."* They also felt that the students were able to gain a methodical approach to patient care.

#### 4.3.3. PERCEPTIONS OF THE PBL STUDENTS CLINICAL ABILITY ON SIMULATED PATIENTS/ MODELS

The five interviewees were full of praises for the PBL students' ability to perform clinical skills on simulated patients/models. They stated that the students had an excellent approach and a confident manner with simulated patients. Some quotations that reinforced this were as follows, *"...I was really amazed at their abilities, even as an intern, I did not have the confidence that they possess and the ability to intubate and put up drips, etc."*, *"I think that we can be guaranteed that these students are so efficient on models that they're definitely going to be efficient on patients....their confidence is transferred from models to patients."* It was also stated that the PBL students' level of maturity and their clinical ability was at an advanced level. They were able to work well under pressure, for example, during the Clinical Skills Assessments, the students are expected to perform a skill in a three minute duration whilst an examiner observes the technique. This can be supported by the following comment, *"I've assessed them on numerous occasions in the clinical skills exams and you can definitely see the benefit of the emergency skills coming into the clinical skills as well. They are able to carry out things smoothly and evenly from A to Z under pressure which is often what happens in emergency situations."*

#### 4.3.4. PERCEPTIONS OF THE 5<sup>TH</sup> YEAR STUDENTS CLINICAL ABILITY ON SIMULATED PATIENTS/ MODELS

The general feeling was that the 5<sup>th</sup> year students lacked confidence when performing skills on the models. Their approach was not systematic and they seemed nervous. Most of the interviewees encountered the 5<sup>th</sup> years during the Anaesthetic Block assessment that was held in the Skills Lab. This assessment is similar to the Clinical Skills Assessment that I have mentioned earlier. Some comments based on the 5<sup>th</sup> year's ability to perform skills on models were *"A lot of them are not used to this kind of assessment so you find them being very, very nervous. In fact, you can see them trying to adapt from their traditional method to the now stepwise approach."* and *"... the first time, I've been exposed to 5<sup>th</sup> years in an assessment, I was astonished by how much difficulty they experienced with the skills."*

#### 4.3.5. DIFFERENCE BETWEEN THE PBL AND TRADITIONAL STUDENTS CLINICAL ABILITY ON SIMULATED PATIENTS/MODELS

The interviewees stated that there definitely was a difference between the PBL and Traditional students in terms of their ability to perform skills on simulated patients/models. Comments indicated that the Traditional students lacked the confidence that the PBL students possess. Direct quotations were as follows, *"I find that Traditional students are walking textbooks, in that they seem to know all the theory and physiology behind the problem, but they lack that practical ability to really deal with the patient and also they lack the confidence which the PBL students possess."* They went on to say that, *"..the PBL students, I've seen them working on simulated models, I've seen their confidence and ability to perform and I think definitely they have more of an advantage, they're more confident in their ability."*

They said that the difference in the clinical ability could be attributed to the difference in the teaching method for example, *"you can see the method of teaching coming out when you see the practise. You can see the 5<sup>th</sup> year students haven't been taught in this way where you have to carry out things from A to Z, ....they were taught, where you watch something and you learn by watching somebody do one and then you do one and then you show somebody else, that's how they learn procedures..."*. It seems that the 3<sup>rd</sup> years have had a lot of exposure to the models and the teaching method and they are therefore quicker and more confident during their assessments whereas the 5<sup>th</sup> years, during the assessments would leave out a few of the crucial steps and be more anxious and nervous. There also seems to be a difference in the manner by which the skill is approached. The following comments were noted. *"... I think we can clearly differentiate between the two groups of students. The younger students are more confident, more aware of empathy, they are extremely aware of the fact that they need to consider their patient's feelings, their ability in terms of communication skills, greetings, confidentiality, and ensuring that the patient is examined in an environment where she feels comfortable."* The researcher believes that these comments nicely sum up the difference between the PBL students' and the Traditional students ability to perform skills on simulated patients and/ or models.

#### 4.3.6. VIEW ON HOW MEDICAL STUDENTS SHOULD BE TAUGHT CLINICAL SKILLS – WHEN? WHERE? AND HOW?

##### ▪ WHEN?

There seemed to be consensus that medical students should, however, be taught clinical skills from their first year of study. However some interviewees believed that it would be useful for the students to first have a basic understanding of Physiology, Anatomy and some Pathology before starting with clinical skills training. Some comments that supported this view were, *“...starting at year one is advantageous .....the fear factor is largely reduced,....skills can be used at home, e.g. when someone is choking, the student is able to put a forcep down the throat and pull out the foreign body.”*, *“I think that it is essential that they should be first taught the Physiology and Pathology before venturing into clinical medicine.”*

##### ▪ WHERE? AND HOW?

All the interviewees felt that there should be a progression from the Skills Lab where the skills are taught on models and/or simulated patients first and then to the real patient. *“I think that both the Lab and wards have a role because there are certain aspects we need to teach in the Lab and the clinical features and signs and symptoms of disease which we could teach in the ward.”*, *“Ideally, a student should be trained first in the Lab on models or simulated patients where their skills can be reinforced, where they can find the confidence to be able to do these skills routinely and at the same time they should be integrated into a ward setting where they can see senior doctors perform these skills and then maybe even attempt certain non-acute procedures on patients.”*

The interviewees also felt strongly that there should be a close link between Lab and ward teaching. One of the comments in this regard was as follows, *“Lab-based skills are essential in their training...it builds confidence, ... also makes the patient less anxious because they can see that you are more confident in the skill. Just for ethical reasons alone, practising procedural skills on models in a lab-based situation is the ideal scenario and obviously these skills would have to be reinforced in the clinical situation ..... It's no point them being taught and then not following up in the wards. There's got to be a close link between the two.”*

#### **4.4. RESPONSES FROM WARD TUTORS**

##### **4.4.1. FAMILIARITY WITH THE ECP (B) COURSE AND THEIR PERCEPTIONS ON THE PRACTICAL CONTENTS**

All the interviewees were aware of the ECP (B) Course. Most of them said that the Course was an excellent bridge between theory and practise. It prepared students for the real clinical scenario. Some direct quotations in this regard were, *"..prepares students for what they will be faced with in the clinical setup....they do not arrive in the wards totally ignorant about aspects of emergency medicine."*

The content of the Course was thought to be relevant and important, *"I think that the clinical aspects like respiratory emergencies and taking care of the airway is extremely important especially in our capacity as doctors."* The following quotations sums up the perceptions on the ECP (B) Course, *"Ever since this course has been introduced to medical students, from 1<sup>st</sup> year onwards, we have found an improved understanding of application of the basic skills for example, if the patient pitches up with an emergency – trauma or non-trauma related, students no longer faint on site....students on 'Intake' are able to respond to emergencies and work together with other members of the team to stabilise patients."*

##### **4.4.2 IMPACT ON STUDENTS' CLINICAL ABILITY**

Most of the interviewees commented that the Course has had a positive impact on the students' clinical ability on real patients. Comments suggesting this were, *"Certainly it has and it is well demonstrated when they are with you where there are patients on whom they need to apply the skills that they have learned in the Skills Lab .....makes teaching them so much easier."*

Students are also familiar with the equipment in the wards, *"They have been able to use equipment confidently and they know names of the equipment."*

One interviewee stated that the students had the ability to perform the skills but she sensed that they were fearful of dealing with real patients. She said, *"... I think he has a sense of fear dealing with a live patient versus a simulated setting."* She believes that students feel that they have more control of a simulated situation because the model does not speak back to them, whereas patients can verbalise responses. Patients also have families and this is

another dynamic that the student has to deal with. She goes on to say, however,, *“But once he overcomes the fear, I think he will do well in the real situation.”*

#### 4.4.3. PERCEPTIONS OF THE PBL STUDENTS CLINICAL ABILITY ON REAL PATIENTS

All the interviewees seemed to believe that the PBL students had gained a very thorough understanding of the ‘A, B, C, D’ approach to patient care. Some of the interviewees also felt that the students appeared a bit apprehensive in terms of applying the skills on real patients. *“Initially, they appear inhibited but with time, students have shed those inhibitions and are now integrating themselves with other team members...”* It was also noted that students should be exposed to real patients much earlier in the Curriculum, *“...they know the practical aspects but when we deal with the real patients they have a sense of fear and I think if that is overcome were they are interacting with patients much earlier in the Curriculum, I believe they would make excellent students.”*

#### 4.4.4. PERCEPTIONS OF THE 5<sup>TH</sup> YEAR STUDENTS’ CLINICAL ABILITY ON REAL PATIENTS

Some of the interviewees commented that the Traditional students found it difficult to approach patients in emergency situations, *“...I think the Traditional students are lagging behind when it comes to managing emergency patients.”* It was also stated that they can deal with non-emergency situations well, *“but in emergency situations, they lack that competency and the confidence to deal with it.”* One of the interviewees strongly felt that the Traditional students have been spoonfed by their tutors in the wards. He said that, *“They are guided through the wards. Their hands are taken by the tutors and placed on patients’ chests, abdomens to feel for a liver, palpate or to percuss.”*

#### 4.4.5. DIFFERENCE BETWEEN THE PBL AND TRADITIONAL STUDENTS CLINICAL ABILITY ON REAL PATIENTS

Most of the interviewees said that they were able to differentiate between the two groups of students based on the following comments, *“...it’s quite easy to differentiate between them because you can see the ease and the confidence in which the PBL students approach the patients ....the Traditional students don’t have an approach to the patient...they pull out things from their heads and try to manage the patient, but no real approach...”* *“The*

*students coming from the PBL do not need to be inducted, they get on with it, whereas Traditional students have to be guided by their clinical tutors.”* The Ward Tutors also commented that the Traditional students were not as familiar with the equipment as the PBL students. The transition from the Skills Lab to the real patient was also smoother with the PBL students. For example, one interviewee stated, *“The Clinical Tutor spends less time at the bedside illustrating to students on how to palpate the liver, whereas the Traditional Curriculum students have to be shown from step A to step X or Y exactly how to palpate for the liver....”*

#### 4.4.6. VIEW ON HOW MEDICAL STUDENTS SHOULD BE TAUGHT CLINICAL SKILLS – WHEN? WHERE? AND HOW?

##### ▪ WHEN?

Some of the interviewees felt that clinical skills training should only be taught after the basic subjects like Anatomy, Physiology and Pathology have been covered. This would give them some insight on exactly how and where in the human body, the procedures would be performed. Others felt that the skills should be *“integrated into the Themes in a progressive fashion, so their learning is incremental and spiral-based ...as they move from year one to year five, their learning content is increased both in depth and in breadth, and their clinical skills has to also improve in parallel to the depth and breadth of the content of the curriculum.”* Most of them stated that skills training should begin at an early stage in the curriculum. Some comments were, *“I think it should start as early as possible, I come from the Traditional Curriculum and I didn’t even know first-aid, so I lacked that confidence to stop and help somebody who is even fainted, because I didn’t know what to do.”* Another interviewee said that clinical skills should be taught fairly close to the time when students are exposed to real patients. She believed that if there was a considerable time delay between Lab teaching and actual performance of skills on the real patient then the Lab teaching would merely serve as a theoretical and mechanical exercise. She went on to say, *“...there should be an opportunity while they are doing their tutorials, to come back into the Lab and fine tune their clinical skills, especially if they feel they are experiencing a bit of anxiety or feel they are lacking confidence.”*

- **WHERE? And HOW?**

All the interviewees believed that there should be a progression from the skills being taught on models first in the Skills Lab, then on simulated patients and lastly on real patients in the wards. Some direct quotes in this regards were, *"I think it should be taught in the Lab....I think we've got an excellent Laboratory here where they will learn to fine tune their skills."*, *"I feel that clinical skills should start in the Lab and then progress to the wards. It should start on models and simulated patients and then progress to real patients because we have to take the patients into consideration. They come here for a service and unless the students know what to do, I don't think they should be allowed to touch the real patients."* They also felt strongly that more simulated patients should be used instead of just models. Students seemed to have a fear of real, talking, walking, patients. This is shown in the following comment, *"....all of us know that we gain confidence on models, but that should be integrated with the live patient, not just when they come into the wards,....should be from 1<sup>st</sup> year, most of them, when they come into the 3<sup>rd</sup> year, when they have exposure to real patients, don't know how to go through this transition."*

#### **4.4.7. RESPONSES FROM THE INTERVIEWS**

Both the Lab Tutors and the Ward Tutors were familiar with the ECP (B) Course that was taught to the 1<sup>st</sup> year students. They all had a fairly good idea of the practical contents of the course. As stated in the Results Chapter, they were all of the opinion that the practical skills that were taught on the course were relevant and extremely beneficial to all the medical students. These skills had a positive impact on the students' clinical ability. It gave them confidence to deal with real patients and competence with the procedures and the relevant equipment. They were able to differentiate between the PBL students and the Traditional students' clinical ability to perform the skills, both in the simulated and real environments. The 5<sup>th</sup> years lacked the confidence and approach that the 3<sup>rd</sup> years had achieved with the models and patients. The Ward Tutors and the Lab Tutors clearly stated that they believed that clinical skills training should start early on in the Medical Curriculum. They also expressed a concern that the students should be taught subjects like Anatomy, Physiology and Pathology before embarking on clinical skills training. The progression of training should be from models and simulated patients in the Skills Lab and then to the real patients. There should also not be too long a time delay between when the skills are taught in the Lab, to when the students are given the opportunity to perform them in the wards. Finally,

all the interviewees felt that the ECP (B) Course should be a compulsory component of the MBChB Curriculum.

## **CHAPTER 5 – IMPLICATIONS OF INTEGRATING THE ECP (B) COURSE IN THE MBChB CURRICULUM AND RECOMMENDATIONS**

This Chapter is dedicated to the third key question of the Study: *What are the implications of the findings with regard to the integration of the ECP (B) Course in the MBChB Curriculum?*

### **5.1.IMPLICATIONS OF INTEGRATING THE ECP (B) COURSE IN THE TRADITIONAL CURRICULUM**

From the research, it is evident that the 3 weeks was insufficient for students to gain the confidence and competence that was required for the clinical management of a patient. (Page 79, Duration of Course). Both the Lab and Ward Tutors commented that the Traditional students were not as confident and lacked a thorough approach to patient care. (Page 47, 4.3.5.). This may also be attributed to the design of the Curriculum that only allowed for the students to work with real patients from their 4<sup>th</sup> year of study (Page 80, Time between Lab and Real situation).

### **5.2.IMPLICATIONS OF INTEGRATING THE ECP (B) COURSE IN THE PBL CURRICULUM**

From the study, it is evident that the course has had a positive impact on the students' clinical ability in that they have gained more confidence and a proper approach to patient care (Table 10, Page 45 and APPENDIX 3B, TABLE 13). The implication of integrating, the course over the entire year, however, was that the students felt that the course was too long in duration (APPENDIX 3B, Table 16). They felt that more time should be allocated to contact with real patients (Page 80, 81).

Integration of the ECP (B) Course into the MBChB Curriculum further implies that there should be a standardised method of teaching skills. The standard should be the same in the Skills Lab as it is in the Wards with real patients. From the evidence, students suggested that there should be better communication between the Lab Tutors and the Ward Tutors (Page 70).

### **5.3. RECOMMENDATIONS BASED ON THE COMMENTS (STAFF AND STUDENTS)**

#### **5.3.1. DURATION OF COURSE**

From the discussion on the 3<sup>rd</sup> and 5<sup>th</sup> year comments/suggestions about the ECP (B) Course (Page 79, 80), the researcher would strongly like to recommend to the Faculty that the ECP (B) Course remain as a compulsory first year module. It should, however, be run twice in the academic year. One hundred students should register for the course in the first semester whilst the other 100% students register for an Elective Module during that time. The Examinations will coincide with the Mid-Year Assessments. The other 100 students will then register for the course in the second semester and attempt the exam with the Year-End Assessment. This would resolve the problems about students being taught the skills early on in the year and only being assessed on them at the end of the year. The Tutor:student ratio would also be reduced to 1:10. The students would then be able to work in smaller groups with more equipment and space.

#### **5.3.2. TIME BETWEEN THE LAB AND REAL SITUATION**

Students should be rostered on compulsory 'intake duties' from their first year of study. From the discussion on time between the Lab and the real situation on (Page 81 and 82), it is clear that students would like the opportunity of performing some of the skills that they have learnt in the Skills Lab immediately on real patients. They would then be exposed to real patients from early in the Curriculum. Their activities during these 'intake' sessions should be closely monitored by a Mentor (an Intern or Registrar).

#### **5.3.3. ENVIRONMENTAL FACTORS INCLUDING EQUIPMENT**

Based on the discussion (Page 82) on environmental factors including equipment, the researcher would like to recommend to the Faculty that more funding should be made available to increase in space and for purchasing more models and mannequins. Due

to severe timetable constraints because of the large numbers of students, the Skills Lab is only available to one cohort of students at a time. This restricts the access to the other students who would like to practise their skills. The researcher would like to appeal to the Faculty to make at least two more seminar rooms available so that different years of students could be accommodated simultaneously. This would also alleviate the problem of overcrowding on the Saturday revision sessions.

#### **5.3.4. COMMUNICATION BETWEEN LAB AND WARD STAFF**

The researcher recommends that there should be regular Workshops on Clinical skills training and assessments of skills for both the Lab and Ward Tutors. From the discussion on communication between Lab and Ward staff (Page 71), it is evident that the students feel that there is inadequate communication between the two groups of Tutors. She suggests that a six-monthly workshop be arranged at the Skills Lab where both groups of Tutors should meet and discuss. The skills and procedures within the MBChB Curriculum. In this way, latest techniques and protocols could be discussed and standardisation of skills training would be achieved.

#### **5.4.FURTHER RESEARCH**

At the end of 2005, a unique situation will arise in that the two cohorts of medical students will graduate from the Nelson R Mandela School of Medicine, i.e. the Traditional Curriculum students and the PBL Curriculum students.

This would create an opportunity for many research studies to identify differences (if any) between the two groups.

The researcher would like to undertake a study to evaluate the impact of clinical skills training in the Skills Laboratory on the Traditional versus PBL graduates who are posted at rural hospitals in KwaZulu-Natal. It would be interesting to see how these graduates are able to utilise their practical skills on real patients in this setting.

## CHAPTER 6 – FINAL COMMENTS

The research has shown that the ECP (B) Course is a vital component of the MBChB Curriculum. This can be said for both the Traditional and the PBL Curricula. Generally, students in both curricula have benefited from the knowledge and skills obtained from the course and they have been successful in applying their skills on real patients. It is also evident that the staff of the Nelson R Mandela School of Medicine, i.e. both the Lab Tutors and the Ward Tutors perceived the course as having a positive impact on both the Traditional and PBL students' clinical ability. They were, however, able to differentiate between the two groups of students based on their clinical skills ability. The students in the Traditional Curriculum, although eventually being able to perform the clinical skills on real patients, seemed less confident and did not have a structured approach to patient care, whereas the PBL students seemed very confident and had a systematic approach to patient care. These differences may be attributed to the teaching and learning styles of the students and the Tutors involved.

According to Ramsden (1992), "when students are taught via the traditional approaches, many of them manage to avoid a 'deep approach' to learning by taking their cue from the hidden curriculum which tells them how to survive the assessment procedures and the lecturers close attention. These students learn how to counterfeit understanding by adopting a 'surface approach' to learning." Ramsden stresses the importance of teaching in such a way as to deny students the opportunity of adopting a surface rather than a deep approach. He characterises the latter as the adoption of a holistic approach to knowledge and the search for meaning with the intention of building coherent mental templates of the subject. A deep approach to learning implies the ability to relate old knowledge to new and to preserve the coherence of the structure of the learning task.

It can be argued that the single most useful thing we as teachers can do to influence positively the process of teaching and learning is to make the right choices in designing a 'fit-for-purpose' assessment strategy. Emergency care is such that it demands a high level of knowledge and skills and a licence to practise is issued at the end of the course. Therefore, the assessment has to be 'fit-for-this-purpose.' It is the researcher's opinion that assessment drives learning and that without some form of

testing most students would not bother to do very much work. Students, however, enter courses with different levels of motivations and a variety of reasons for wanting to study. In the case of Medicine, students are looking for a vocational qualification and therefore, as a Tutor, one should make the assessment a positive experience. On choosing the various assessment strategies, we should determine whether they are 'fit-for-purpose', whether it becomes genuinely a part of the learning process or whether it becomes an increasingly meaningless and bureaucratic task. Eliciting learner's self-assessment, relating feedback to objectives and following up on feedback ensures optimum learning.

The skill of self-evaluation is necessary for life-long learning, for competent performance – in short, for professional practice in health sciences. Health care professionals need to be aware of their present abilities and limitations in order to determine their continuing educational needs. The purported advantages of this approach for students include: increased learning as a consequence of identifying the learner as the party chiefly responsible for his/her learning; increased probability that these individuals will continue to learn throughout their lives and on enhanced ability to apply theoretical concepts to situations in real-world settings. To learn how to learn, individuals must develop the ability to readily assess their deficiencies in knowledge and skills.

Rowntree (1977) and Woodward (1981) suggest that there is more to be gained from self-evaluation awareness of knowledge gaps: skill in self-evaluation is also a prerequisite for continuing learning. Helping students develop self-evaluation skills may be one method of helping students make realistic appraisals of their performance on an ongoing basis.

Self-evaluation is associated with the development of a concept of being a professional. Such development is part of the process by which students are socialised to think, act and view themselves as professionals. It culminates in something of a match between how the individual sees him/ or herself and his/ her concept of a member of that profession.

The capacity to self-evaluate is a basic requirement for persons who are expected to monitor themselves and to make competent, independent judgements about their activities just like the Medical Practitioner is left alone to make these judgements with patient's lives.

In this concluding chapter, the researcher would like to take this opportunity in reflecting on her practice as the Emergency Care Tutor.

As a professional paramedic, I find that *"I know more than I can say"* (Schon, 1983). When I am faced with a real life situation, for example a patient who has a gunshot wound to his chest, I am spontaneously able to execute full management protocol to this patient. According to Schon (1987) *"this is called knowing-in-action-which is publicly observable, physical performance."* *"We reveal this by our spontaneous skilful execution of the performance and we are characteristically unable to make it verbally explicit."* (Schon, 1987). He goes on to say that, *"We may, however, reflect on our actions and make a description of the knowing in them. This may be a list of sequences of operations, or a list of rules we follow. When we describe knowing-in-action we convert it to knowledge-in-action (Schon, 1987)."*

As soon as a specific patient care management protocol is learned, we can execute smooth sequences without having to think about it. However, a familiar routine may produce an unexpected result, for example a patient may not respond to a particular drug therapy in the desired manner. This forces us to look at actions and outcomes in a new way. Such experiences contain surprise. We may respond to this by reflection by either thinking back on what we have done after the fact, i.e. reflect on action or by reflecting in the midst of action without interrupting it, i.e. reflect in action. (Schon, 1987)

Reflection in action questions the assumptional structure of knowing-in-a-action. We think critically about the thinking that got us into the mess and may restructure strategies of action. Reflection in action is different from other forms of reflection because of its immediate significance for action. This is important especially with regard to patient care, as the patient's life rests upon one's correct actions.

Like knowing in action, reflection in action is a process we can deliver without being able to say what we are doing. Reflecting on past reflection-in-action may, however, indirectly improve our future action and this would in turn improve our skills. According to Schon (1987), “these several levels and kinds of reflection play an important role in the acquisition of artistry.”

In my skills training programme for the medical students, I try to create a safe learning environment where important clinical skills and life saving procedures are performed on models and simulators until they are perfected. This eradicates the old method of practising on real patients. The safe learning environment, i.e. the Skills Laboratory can be likened to what Schon (1987) calls a ‘practicum’. He says that, “a practicum is a setting designed for the task of learning a practice. In a context that approximates a practice world, students, learn by doing. The practicum is a virtual world, relatively free of the pressures, distractions and risks of the real one, to which nevertheless, it refers (Schon, 1987).”

My role as the Emergency Care Tutor can be likened to that of a coach, whose job it is to demonstrate, advise, question and criticise. As an educator engaged in higher education, I hope that in future there is a move away from an authoritarian approach to education where there was little or no room for the development of critical capacity or the power of independent thought and enquiry. In the future, I aspire to use an approach that embraces the capacity of learners to think for themselves, to learn from their environment and to respond to the guidance of their facilitators who value creativity and self-motivated learning.

In teaching Emergency Care, I think that the ideal would be to create a versatile learner who combines both operation and comprehension process, aiming for deep understanding buttressed by a sound factual knowledge.

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**Appendix 1: QUESTIONNAIRE**

**UNIVERSITY OF KWAZULU NATAL  
NELSON R MANDELA SCHOOL OF MEDICINE**

**GENERAL INFORMATION, PLEASE TICK IN THE APPROPRIATE BOX AND FILL IN THE SPACES PROVIDED**

YEAR OF STUDY:      

1	2	3	4	5
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PLEASE ANSWER THE FOLLOWING QUESTIONS ON THE COMPUTER SHEET. COLOUR IN EITHER A, B, C, D, OR E WHERE:

- A = STRONGLY AGREE
- B = AGREE
- C = NEUTRAL
- D = DISAGREE
- E = STRONGLY DISAGREE

**A. GENERAL INFORMATION ABOUT THE EMERGENCY CARE PRACTITIONER (BASIC) COURSE**

1	I have a clear understanding of the functions of the Skills Laboratory
2	I understand the aims and objectives of the ECP (B) Course
3	I consider the learning experience during the ECP (B) Course as time and effort well spent
4	The Course helped me to acquire important basic medical knowledge of patient care
5	The Course helped me achieve a deeper understanding of how to approach an 'emergency situation'
6	The Course was held too long ago, I have forgotten the skills that were taught during the course
7	The Course was too short in duration
8	The method of teaching the Course was satisfactory
9	On completion of ECP (B) Course, I am now more confident in my medical management of a real patient
10	The Course was a rewarding learning experience

A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E



**D. WITH REGARD TO THE EMERGENCY SKILLS TUTOR (LAB-BASED), PLEASE RESPOND TO THE FOLLOWING:**

35	The tutor was punctual
36	He/She appeared enthusiastic about the skills training session
37	The tutor created a supportive climate/ atmosphere
38	The tutor ensured that the demonstration was visible to all in the group
39	He/She was audible during the demonstration
40	He/She was confident about the procedure/skill that was being demonstrated
41	The tutor provided opportunities to practise the skill
42	He/She gave good practical assistance and input
43	He/She was helpful and supportive
44	He/She was approachable and friendly
45	The tutor was a good role model

A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E
A	B	C	D	E

COMMENTS: .....

.....

SUGGESTIONS: .....

.....

**E. OPEN-ENDED QUESTIONS, PLEASE ANSWER THE FOLLOWING QUESTION IN THE SPACES PROVIDED**

46. Comment on the impact of the Emergency Care Course on your clinical practise.

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47. Please make any comments or suggestions about the Emergency Care Course in the space below:

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Thank you for your time and co-operation in completing this questionnaire.  
Saras Reddy

## Appendix 2: DATA ANALYSIS OF LIKERT SCALE RESPONSES FROM QUESTIONNAIRE

3rd Years	% AGREE	% NEUTRAL	% DISAGREE
1. I have a clear understanding of the functions of the Skills Laboratory	97	0	3
2. I understand the aims and objectives of the ECP (B) Course	83	14	3
3. I consider the learning experience during the ECP (B) Course as time and effort well spent	80	17	3
4. The Course helped me to acquire important basic medical knowledge of patient care	93	0	7
5. The Course helped me achieve a deeper understanding of how to approach an 'emergency situation'	87	7	7
6. The Course was held too long ago, I have forgotten the skills that were taught during the course	27	20	53
7. The Course was too short in duration	17	3	79
8. The method of teaching the Course was satisfactory	69	14	17
9. On completion of ECP (B) Course, I am now more confident in my medical management of a real patient	57	23	20
10. The Course was a rewarding learning experience	80	13	7
11. Clear, open and maintain a simulated patient's airway at basic life support level	90	0	10
12. Assess a simulated patient's respiratory rate, rhythm and depth	97	0	3
13. Identify and correctly use the appropriate O2 delivery device (40% venturi mask, nasal cannula, Ambu bag) to assist with a simulated patient's breathing	90	0	10
14. Locate and assess a simulated patient's pulse at all the correct landmarks	87	7	7
15. Identify the different types of haemorrhage and perform the appropriate methods of controlling it in a simulated scenario	77	7	17
16. Correctly assess a simulated patient's blood pressure	93	0	7
17. Perform a Haemoglucotest on a simulated patient	93	0	7
18. Assess a simulated patient's skin colour, texture and temperature in a simulated scenario	83	7	10
19. Assess a simulated patient's Glasgow coma scale in a simulated scenario	80	7	13
20. Perform Cardio Pulmonary Resuscitation at basic life support level on a simulated adult patient	97	0	3
21. Perform Cardio Pulmonary Resuscitation at basic life support level on a simulated infant patient	97	0	3
22. Perform a simulated foetal and placental delivery	41	7	52
23. Clear, open and maintain a real patient's airway at basic life support level	45	24	31
24. Assess a real patient's respiratory rate, rhythm and depth	87	10	3
25. Identify and correctly use the appropriate O2 delivery device (40% venturi mask, nasal cannula, Ambu bag) to assist with a real patient's breathing	53	23	23
26. Locate and assess a real patient's pulse at all the correct landmarks	93	3	3
27. Identify the different types of haemorrhage from a real patient and have successfully controlled it	48	14	38
28. Assess the patient's blood pressure correctly	90	3	7
29. Perform a Haemoglucotest on a real patient	62	14	24
30. Assess a real patient's skin colour, texture and temperature	76	7	17
31. Assess the Glasgow coma scale of a real patient	66	14	21
32. Perform Cardio Pulmonary Resuscitation at basic life support level on an adult patient	45	28	28
33. Perform Cardio Pulmonary Resuscitation at basic life support level on a infant patient	34	24	41
34. Perform a real foetal and placental delivery	10	17	72
35. The tutor was punctual	92	4	4
36. He/She appeared enthusiastic about the skills training session	88	4	8
37. The tutor created a supportive climate/ atmosphere	79	13	8
38. The tutor ensured that the demonstration was visible to all in the group	75	8	17
39. He/She was audible during the demonstration	100	0	0
40. He/She was confident about the procedure/skill that was being demonstrated	100	0	0
41. The tutor provided opportunities to practise the skill	96	0	4
42. He/She gave good practical assistance and input	88	4	8
43. He/She was helpful and supportive	88	4	8
44. He/She was approachable and friendly	79	8	13
45. The tutor was a good role model	70	17	13

5th Years	%AGREE	%NEUTRAL	%DISAGREE
1. I have a clear understanding of the functions of the Skills Laboratory	93	3	3
2. I understand the aims and objectives of the ECP (B) Course	87	13	0
3. I consider the learning experience during the ECP (B) Course as time and effort well spent	97	3	0
4. The Course helped me to acquire important basic medical knowledge of patient care	97	3	0
5. The Course helped me achieve a deeper understanding of how to approach an 'emergency situation'	100	0	0
6. The Course was held too long ago, I have forgotten the skills that were taught during the course	33	17	50
7. The Course was too short in duration	43	23	33
8. The method of teaching the Course was satisfactory	90	7	3
9. On completion of ECP (B) Course, I am now more confident in my medical management of a real patient	73	23	3
10. The Course was a rewarding learning experience	90	10	0
11. Clear, open and maintain a simulated patient's airway at basic life support level	93	7	0
12. Assess a simulated patient's respiratory rate, rhythm and depth	97	3	0
13. Identify and correctly use the appropriate O2 delivery device (40% venturi mask, nasal cannula, Ambu bag) to assist with a simulated patient's breathing	97	3	0
14. Locate and assess a simulated patient's pulse at all the correct landmarks	90	10	0
15. Identify the different types of haemorrhage and perform the appropriate methods of controlling it in a simulated scenario	67	23	10
16. Correctly assess a simulated patient's blood pressure	97	0	3
17. Perform a Haemoglucotest on a simulated patient	87	3	10
18. Assess a simulated patient's skin colour, texture and temperature in a simulated scenario	90	7	3
19. Assess a simulated patient's Glasgow coma scale in a simulated scenario	90	10	0
20. Perform Cardio Pulmonary Resuscitation at basic life support level on a simulated adult patient	100	0	0
21. Perform Cardio Pulmonary Resuscitation at basic life support level on a simulated infant patient	77	10	13
22. Perform a simulated foetal and placental delivery	57	10	33
23. Clear, open and maintain a real patient's airway at basic life support level	87	13	0
24. Assess a real patient's respiratory rate, rhythm and depth	100	0	0
25. Identify and correctly use the appropriate O2 delivery device (40% venturi mask, nasal cannula, Ambu bag) to assist with a real patient's breathing	80	17	3
26. Locate and assess a real patient's pulse at all the correct landmarks	93	3	3
27. Identify the different types of haemorrhage from a real patient and have successfully controlled it	70	23	7
28. Assess the patient's blood pressure correctly	97	3	0
29. Perform a Haemoglucotest on a real patient	97	0	3
30. Assess a real patient's skin colour, texture and temperature	97	3	0
31. Assess the Glasgow coma scale of a real patient	97	0	3
32. Perform Cardio Pulmonary Resuscitation at basic life support level on an adult patient	60	40	0
33. Perform Cardio Pulmonary Resuscitation at basic life support level on a infant patient	50	37	13
34. Perform a real foetal and placental delivery	90	7	3
35. The tutor was punctual	96	4	0
36. He/She appeared enthusiastic about the skills training session	96	4	0
37. The tutor created a supportive climate/ atmosphere	93	4	4
38. The tutor ensured that the demonstration was visible to all in the group	89	7	4
39. He/She was audible during the demonstration	96	4	0
40. He/She was confident about the procedure/skill that was being demonstrated	100	0	0
41. The tutor provided opportunities to practise the skill	93	4	4
42. He/She gave good practical assistance and input	93	7	0
43. He/She was helpful and supportive	96	4	0
44. He/She was approachable and friendly	93	4	4
45. The tutor was a good role model	74	19	7

Appendix 3A: 3RD AND 5TH YEAR COMMENTS AND CODING FOR OPEN ENDED QUESTIONS

3RD YEAR COMMENTS DATA SHEET												
YEAR OF	No.	B1 - COMMENTS ON SKILLS LEARNT	CODE	C1 - COMMENTS/ SUGGESTIONS ON	CODE	D1 - COMMENTS/SUGGESTIONS ON	CODE	E46 - COMMENT ON IMPACT OF ECC ON	CODE	E47 - COMMENTS/SUGGESTIONS ON ECC	CODE	
STUDY	IN LAB	SKILLS APPLIED ON REAL		PATIENTS		EMERGENCY SKILLS TUTOR		CLINICAL PRACTICE				
3	1		0		0		0	At the moment I go to the hospital over holidays and I feel confident whenever I'm asked to perform a procedure.	CON, COM			
3	5	It takes too much of our time. Should be for 2 months not the whole year.	D	Assessments were not organised & were not fair. No one should fail at the end	AS		0		0	A year is too much it is a waste of our valuable time	D	
3	6		0		0		0		0		0	
3	7	It was a good experience especially going on the ambulance experience..it gave me a chance to apply all the I had learnt in the classroom to a real situation	E+, A		0		0	Excellent experience where I received my foundations/groundings to prepare / which has prepared me for clinical practise	E+, A	The duration of the course should be more	D+	
3	8		0		0		0	Emergency Care Course has positively impacted on my clinical practise. When I'm doing my blocks I have an idea of what's expected of me & it makes my life in this medical field so much more easy	A, E+, CON	In terms of examiner's get people who will be on the level with all students listen to what they have to say & not intimidate & make the whole exam atmosphere horrible. People who are considerate & passionate for their students & work.	AS	
3	9		0		0		0		0		0	
3	10		0		0		0		0		0	
3	11		0		0		0	Introduced us to the essentials of HHH ABCI	A, CT		0	
3	12		0		0		0	There should be more exposure to real life emergency e.g. more intakes in the ambulance base situations can be useful	WT		0	
3	13	Nice ideas - but need 2 interact more with the consultants because our methods were not always up to scratch with what they expect of us - its not that we've forgotten what we learnt, some of what we learnt wasn't what was being done in the wards.	C	By the time we get 2 wards, we've forgotten what we learnt or else we haven't been exposed 2 things. I haven't had 2 assess haemorrhage, do CPR etc in the wards. Maybe after learning on dummies, more emphasis should be placed on real-life scenarios	T, CT		0	Good Basics. But not 'practice' on real ppl	E+		0	
3	14		0		0	The ECP tutor made the course interesting since I have learnt the management of pts in an emergency situation.	ECT+		0		0	
3	15		0		0	I feel that Course shouldn't be stretched throughout the whole year. The course should be done in the first semester.	D	Has very little effect/impact on my clinical work.	E-	None		
3	19		0		0		0	It helped me to understand more things on my clinical career	E+, A		0	
3	20		0		0	It must not go on for longer than 1yr. Some 3rd years still don't have their certificates	D		0		0	
3	21		0		0		0		0		0	
3	23		0		0		0		0		0	
3	24		0		0		0	It helped me to develop the skill on how to manage the patient at a primary level	A		0	

YEAR OF STUDY	No.	B1 - COMMENTS ON SKILLS LEARNT IN LAB	CODE	C1 - COMMENTS/ SUGGESTIONS ON SKILLS APPLIED ON REAL PATIENTS	CODE	D1 - COMMENTS/SUGGESTIONS ON EMERGENCY SKILLS TUTOR	CODE	E46 - COMMENT ON IMPACT OF ECC ON CLINICAL PRACTICE	CODE	E47 - COMMENTS/SUGGESTIONS ON ECC	CODE
3	25		0		0	We understand that it is very stressful to deal with over 200 students at one go but naturally it is to be expected and maybe there are better ways of dealing with the stress and snapping is not one of them	ECT-	It has at least given me a proper approach to patients and emergency settings	A, COM	I think it's a brilliant course but more effort could be applied to actually getting live patients on whom to practice on rather than dummies	E+, EN
3	28		0		0	The exam time for 5 components was too short, there was too much pressure on me. Give a space between each of the components.	AS	It made theme 1.6 very easy	CT, A		0
3	29	The course, I think the course was too long & that the practice was never really done on live patients	D		0		0		0		0
3	31		0		0		0		0		0
3	32		0		0		0	It had a great impact on my clinical practise. The skills I learnt I use often in hospital, especially as part of the general exam. We don't have that much exposure 2 emergency medicine though	A, E+, CON	I would suggest that protocols for different emergencies are made not all, maybe the main ones like: the fitting patient, MVA etc. This will also standardise what tutors teach, as there were many disparities from tutor to tutor with regard to their approach to specific scenarios.	CM, ECT
3	65	It would be easier to go to the hospital & observe/do the skills in 1st yr instead of waiting 4 3rd yr	T	Most of the skills I learned in 1st yr I have not had the opportunity 2 perform	T		0	The course helps us to understand patient care from the moment we see the patient and it helped a lot in understanding surgery & management.	A, E+, CON	I would prefer to have had the opportunity to go and practice skills at the hospital while they were fresh in my mind in order 4 me to know if I really am competent or just comfortable with a simulated model	T, COM
3	66		0		0		0	It helped with understanding basic pathophysiology in trauma situations	CON, A	Examinations should not around the same time as course exams	AS
3	67		0		0		0	It provided a good basis for our introduction to clinical methods at hospital	A		0
3	68		0		0		0	It helped in understanding the basics of clinical practise	A	It is too long, should not run throughout the whole year	D
3	69		0	Some skills eg. Delivering a fetus need to be experienced - learning/being taught is not enough to prepare you	T		0	It was great. Gave me a sense of what was to come & a sense of being confident in handling an emergency. Also made me feel comfortable with equipment	E+, CON, A, COM, EN		0
3	70		0		0		0	Makes the theoretical aspects of medicine more realistic	A	Job well done	E+
3	71	My experience in the Skills lab was a worthwhile & exciting experience	E+		0		0		0		0
3	73		0		0		0	Havent been exposed to all the things we learnt in the emergency care course so it's hard to assess the impac. Definitely gives you confidence though	CON		0

### 5th YEAR COMMENTS DATA SHEET

YEAR OF STUDY	No.	B1 - COMMENTS ON SKILLS LEARNT IN LAB	Code	C1 - COMMENTS/ SUGGESTIONS ON SKILLS APPLIED ON REAL PATIENTS	Code	D1 - COMMENTS/SUGGESTIONS ON EMERGENCY SKILLS TUTOR	Code	E46 - COMMENT ON IMPACT OF ECC ON CLINICAL PRACTICE	Code	E47 - COMMENTS/SUGGESTIONS ON ECC	Code
5	33		0		0			The course allowed me to practice & understand some basic emergency skills that I have needed in the wards	E+, A	I feel that we should be encouraged to maintain our skills & be re-assessed at various times to show our proficiency in those skills. The course itself was well run and informative	R, E+, CT, ECT
5	35		0		0			All fitting into place now. Aided in Anaesthetics training. Helps you think on your feet	A, COM	Should be revised in 5th/ 6th year. Very helpful. Very practical	R, CD, E+
5	36		0		0			It taught me how to react in an emergency situation. It helped me attain a certain level of confidence and competence	A, COM, CON	I feel that it is a module which benefits the student greatly. Future students of this course will not be short-changed if this course remains compulsory	E+, CD
5	37		0		0			It gave me more competence when dealing with pts	COM, A		0
5	38		0		0			Helps give you a grounding but we spent too little time doing it. Less time should be spent with models as it is not the same when faced with a real patients	A, D, CT		0
5	39		0		0			it was helpful in being the first exposure to clinical medicine setting	E+, A		0
5	40		0		0			It has taught us the emergency resus. Protocol needed for us to be competent in the wards and the public	CT, COM		0
5	41		0		0			I think it was an excellent opportunity to get in touch with emergency practises. It was fun & refreshing	A, E+		0
5	42		0		0			My first experience with the Emergency Care Course was at the beginning of my studies and I found this to be most helpful in forming a solid base for further studies.	E+, A	This course should be integrated into all years of study. As part of the old curriculum I was only taught IV cannulation in my 5th year after I had performed this skill by myself on many pts previously	CD, A
5	43		0		0		I attended the ECP (B) course in 2000 too long ago. Should be spread out over the years or revised every year	T, CD, R	COM, E		0
5	44		0		0			It improved my clinical skills. Allowed me to practise skill I was not confident in a non-life threatening arena.	E+, CON, EN	More time spent there. Focus on more complicated procedures	D, CT
5	45		0		0			It has improved my competence & therefore my confidence in emergency care - I have a clear approach to emergency situations especially in theatre and in environment outside Medical school	COM, CON, A		0

YEAR OF STUDY	No.	B1 - COMMENTS ON SKILLS LEARNT IN LAB		C1 - COMMENTS/ SUGGESTIONS ON SKILLS APPLIED ON REAL PATIENTS		D1 - COMMENTS/SUGGESTIONS ON EMERGENCY SKILLS TUTOR		E46 - COMMENT ON IMPACT OF ECC ON CLINICAL PRACTICE		E47 - COMMENTS/SUGGESTIONS ON ECC	
5	46		0		0		0	It was a good introduction to medicine. Help a lot. Very beneficial	E+, A, CT		0
5	51		0		0		0	it gave me a little bit of foundation	A	I'm old curriculum, so I really don't know what's going on there anymore	
5	53		0		0		0	It made initial clinical practice in the ward easier. It was good & beneficial to apply what we learnt	A, E+,	it should be done in 3rd year before clinicals in the wards begin & then refresher courses should be done, where the scenarios are played out & the emergency is managed, each year	CD, T, R
5	55		0		0	The course was taught very well but was done in the very short period of time. I suggest it may be done in 4 wks with the correct booknotes / algorithms to follow	ECT+, D, CM			I suggest that the course is done once, that is it was done in first yr so there is no good reason for us to do it in 6th year again however, it is good to revise or to practise but not to be re-assessed on it.	R
5	59		0		0		0	Very beneficial - the only course that actually teaches clinical skills in old curriculum	E+, CT	Emergency care should be continued throughout the medical school - old curriculum was exposed only in 1st yr.	CD, D
5	60		0	Skills taught @ skills lab were useful but it is the clinical experience that is more beneficial. As u can't detect the skin colour / hypovalania in a simulation	E, A		0	Satisfactory	E+	The course was intensive in 1st year  an effort should be made to repeat it possibly in 3rd/ 6th year	R, CD
5	61		0		0		0	It was my first exposure to life support skills. It gave me confidence, in that I feel like I will be able to apply it to a real life situation	CON, E+, A	Need more time for practicing (skills lab always seems busy). Need more equipment for students to practice on	EN
5	62	It helped but is very different in real life with real patients	A	Not realistic on a dummy	E-	Was very helpful & always approachable. Smaller groups may be more beneficial	ECT+, EN	Has enriched my learning experience. There skills were not taught in any other discipline so is very important	E+, CT	Smaller groups. More time to practice & a larger LAB with more equipment	EN
5	74		0		0		0	Very good. Still referred to the knowledge gained years after the course. Even the theory.	E+, CT, A	Should include methods of venepuncture & IV cannulation & catheterization before we go to wards & learn bad methods	CT, T
5	75		0		0		0	The emergency course was an excellent introduction to medical skills. These skills haven't been taught to us in such detail thereafter	E+, CT, A	the course should be continued beyond the 1st year & definitely in the 3rd year of study. Certain skills like IV cannulation & venepuncture should be introduced before debut into the wards	CD, T

YEAR OF STUDY	No.	B1 - COMMENTS ON SKILLS LEARNT IN LAB		C1 - COMMENTS/ SUGGESTIONS ON SKILLS APPLIED ON REAL PATIENTS		D1 - COMMENTS/SUGGESTIONS ON EMERGENCY SKILLS TUTOR		E46 - COMMENT ON IMPACT OF ECC ON CLINICAL PRACTICE		E47 - COMMENTS/SUGGESTIONS ON ECC	
5	76		0		0	Such teachings are of great benefit to students and more have to be incorporated into it. These skills should be incorporated into all the academic years (1-5th/6th yr)	ECT+, CD	More confidence on approaching and dealing with patients	CON, A	none	
5	78	The course was very helpful and gives one an approach to real life situations. It should be done more with the years	E+, A, C, D	Because one had practiced from dummies, it easy to approach a real patient	A, COM		0	One is confident about emergency situation because it is a very detailed course	CON, CT	There should be revision into the later years, just as we are about to graduate. Just to refresh.	R
5	79		0		0	I enjoyed my time @ the Skills lab. Time should be set aside for other years to fit in to the skills programme.	ECT+, CD	Helped me a lot and to be confident to do the skills on real patients	CON, E+, A	Should be intergrated in the course and be refresher courses to that.	CD, R
5	80		0		0	It is a very helpful course. Teach more skills	E+, CD	Most of the skills learnt were used in the wards.	A, CT	Perhaps introduce more skills like IV lives	CT
5	81		0		0		0	It added an essential practical component to a very theoretical cause to study	CT	Should have refresher courses every year even if it is only for 2 days a year	R
5	82	The course was a great help. It really gave us a good start. More time should be allocated to the course and it should be done hand and in hand wih real scenario	E+, D, T	I am now confident to handle patients in the ward. More time is needed with the patients.	CON, WT	Please keep up the good work. Everything is up to standard, I have no suggestions.	ECT+	It has helped me to be able to handle my patients well and to be confident when doing that.	A, CON	More space is needed as there is too many of how at medical school	EN
5	84	Gives you a good clinical grounding and improves confidence & competency.	A, CON, COM	There is limited exposure at times in wards	WT	Always helpful and willing to sacrifice his/her time for our learning. Very approachable. Made learning fun.	ECT+	It was helpful in providing us with extra confidence in the wards and giving some experience as opposed to none. However we/I was not expected to perform these tasks as yet.	CON, E+	It should be maintained and is important as important principles of emergency management is learnt and never taught to us in the wards.	CT, E+, COM
5	86	There was an overcrowding of student during practice of skill. Need more space to perform and practice all these skills	EN	KEH, more health caregivers - thus deprive student to perform some other technique	WT		0		0		0

**APPENDIX 3B**

**TABLE 12: 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR RESPONSES ON CLINICAL SKILLS LEARNT DURING THE ECP (B) COURSE ON MODELS AND/ OR SIMULATED PATIENTS IN THE SKILLS LAB (APPENDIX 1 PART B1)**

B1 - COMMENTS ON SKILLS LEARNT IN LAB	Year 3			Year 5		
	No	Positive	Negative	No	Positive	Negative
D = Duration of course	2		It takes too much of our time. Should be for 2 months not the whole year.	2		The course was very helpful and gives one an approach to real life situations. It should be done more with the years
			The course, I think the course was too long & that the practise was never really done on live patients			The course was a great help. It really gave us a good start. More time should be allocated to the course and it should be done hand and in hand wih real scenario
E = Learning experience	2	My experience in the Skills lab was a worthwhile & exciting experience It was a good experience especially going on the ambulance experience..it gave me a chance to apply all I had learnt in the classroom to a real situation		2	The course was a great help. It really gave us a good start. More time should be allocated to the course and it should be done hand and in hand wih real scenario The course was very helpful and gives one an approach to real life situations. It should be done more with the years	
A = Application of knowledge	1	It was a good experience especially going on the ambulance experience..it gave me a chance to apply all I had learnt in the classroom to a real situation		3	The course was very helpful and gives one an approach to real life situations. It should be done more with the years Gives you a good clinical grounding and improves confidence & competency.	It helped but is very different in real life with real patients
C = Communication between Lab and Ward staff	1		Nice ideas - but need 2 interact more with the consultants because our methods were not always up to scratch with what they expect of us - its not that we've 4gotten what we learnt, some of what we learnt wasn't what was being done in the wards.	0		
T = Time between Lab and real situation	1		It would be easier to go to the hospital & observe/do the skills in 1st yr instead of waiting 4 3rd yr	1		The course was a great help. It really gave us a good start. More time should be allocated to the course and it should be done hand and in hand wih real scenario
Con = Confidence to perform skill	0			1	Gives you a good clinical grounding and improves confidence & competency.	
Com = Competence of execution of skill	0			1	Gives you a good clinical grounding and improves confidence & competency.	
En = Environmental factors including equipment	0			1		There was an overcrowding of student during practise of skill. Need more space to perform and practise all these skills
AS = Assessment	0			0		

WT = Ward time - time spent with real patient	0			0	
ECT = Emergency Care Tutor	0			0	
CM = Course Material	0			0	
CD = Course design	0			1	The course was very helpful and gives one an approach to real life situations. It should be done more with the years.
CT = Course Content	0			0	
R = Revision of skills	0			0	

**TABLE 13: 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR RESPONSES TO CLINICAL SKILLS APPLIED ON REAL PATIENTS IN THE HOSPITAL SETTING (APPENDIX 1, PART C1)**

C1 - COMMENTS/ SUGGESTIONS ON SKILLS APPLIED ON REAL PATIENTS	Year 3			Year 5		
	No	Positive	Negative	No	Positive	Negative
D = Duration of course	0			0		
E = Learning experience	0			2		Not realistic on a dummy
				1	Skills taught @ skills lab were useful but it is the clinical experience that is more beneficial. As u can't detect the skin colour / hypovalania in a simulation	
A = Application of knowledge	0			2	Because one had practised from dummies, it easy to approach a real patient	Skills taught @ skills lab were useful but it is the clinical experience that is more beneficial. As u can't detect the skin colour / hypovalania in a simulation
C = Communication between Lab and Ward staff	0			0		
T = Time between Lab and real situation	3		By the time we get 2 wards, we've 4gotten what we learnt or else we haven't been exposed 2 things. I haven't had 2 assess haemorrhage, do CPR etc in the wards. Maybe after learning on dummies, more emphasis should be placed on real-life scenarios	0		
			Some skills eg. Delivering a fetus need to be experienced - learning/being taught is not enough to prepare you			
			Most of the skills I learned in 1st yr have not had the opportunity 2 perform			
Con = Confidence to perform skill	0			1	I am now confident to handle patients in the ward. More time is needed with the patients.	
Com = Competence of execution of skill	0			1	Because one had practised from dummies, it easy to approach a real patient	
En = Environmental factors including equipment	0			0		
AS = Assessment	1		Assessments were not organised & were not fair. No one should fail at the end	0		

WT = Ward time - time spent with real patient	0			3		I am now confident to handle patients in the ward. More time is needed with the patients.
						There is limited exposure at times in wards
						KEH, more health caregivers - thus deprive student to perform some other technique
ECT = Emergency Care Tutor	0			0		
CM = Course Material	0			0		
CD = Course design	0			0		
CT = Course Content	1		By the time we get 2 wards, we've 4gotten what we learnt or else we haven't been exposed 2 things. I haven't had 2 assess haemorrhage, do CPR etc in the wards. Maybe after learning on dummies, more emphasis should be placed on real-life scenarios	0		
R = Revision of skills	0			0		

TABLE 14: 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR COMMENTS/ SUGGESTIONS ON THE EVALUATION OF THE EMERGENCY SKILLS TUTOR (LAB-BASED) (APPENDIX 1, PART D1)

D1 - COMMENTS/SUGGESTIONS ON EMERGENCY SKILLS TUTOR	Year 3			Year 5		
	No	Positive	Negative	No	Positive	Negative
D = Duration of course	2		I feel that Course shouldn't be stretched throughout the whole year. The course should be done in the first semester. (*will be discussed in E47)	1		The course was taught very well but was done in the very short period of time. I suggest it may be done in 4 wks with the correct booknotes / algorithms to fw (*will be discussed in E47)
E = Learning experience	0		It must not go on for longer than 1yr. Some 3rd years still don't have their certificates (*will be discussed in E47)	1	It is a very helpful course. Teach more skills	
A = Application of knowledge	0			0		
C = Communication between Lab and Ward staff	0			0		
T = Time between Lab and real situation	0			1		I attended the ECP (B) course in 2000 too long ago. Should be spread out over the years or revised every year (*Will be discussed)
Con = Confidence to perform skill	0			0		
Com = Competence of execution of skill	0			0		
En = Environmental factors including equipment	0			1		Was very helpful & always approachable. Smaller groups may be more beneficial

AS = Assessment	1		The exam time for 5 components was too short, there was too much pressure on me. Give a space between each of the components. (E47)	0		
WT = Ward time - time spent with real patient	0			0		
ECT = Emergency Care Tutor	2		The ECP tutor made the course interesting since I have learnt the management of pts in an emergency situation.	6		We understand that it is very stressful to deal with over 200 students at one go but naturally it is to be expected and maybe there are better ways of dealing with the stress and snapping is not one of them
					The course was taught very well but was done in the very short period of time. I suggest it may be done in 4 wks with the correct booknotes / algorithms to ffw	
					Was very helpful & always approachable. Smaller groups may be more beneficial	
					Such teachings are of great benefit to students and more have to be incorporated into it. These skills should be incorporated into all the academic years (1-5th/ 6th yr)	
						I enjoyed my time @ the Skills lab. Time should be set aside for other years to fit in to the skills programme.
						Please keep up the good work. Everything is up to standard, I have no suggestions.
						Always helpful and willing to sacrifice his/her time for our learning. Very approachable. Made learning fun.
			<b>Year 3</b>	<b>Year 5</b>		
<b>D1 - COMMENTS/SUGGESTIONS ON EMERGENCY SKILLS TUTOR</b>	No	Positive	Negative	No	Positive	Negative
CM = Course Material	0			1		The course was taught very well but was done in the very short period of time. I suggest it may be done in 4 wks with the correct booknotes / algorithms to ffw (E47)
CD = Course design	0			3		I attended the ECP (B) course in 2000 too long ago. Should be spread out over the years or revised every year (E47)
					It is a very helpful course. Teach more skills	
					Such teachings are of great benefit to students and more have to be incorporated into it. These skills should be incorporated into all the academic years (1-5 <sup>th</sup> / 6th yr) (E47)	
						I enjoyed my time @ the Skills lab. Time should be set aside for other years to fit in to the skills programme. (E47)
CT = Course Content	0			0		
R = Revision of skills	0			1		I attended the ECP (B) course in 2000 too long ago. Should be spread out over the years or revised every year (E47)

TABLE 15: 3<sup>RD</sup> AND 5<sup>TH</sup> YEAR RESPONSES ON THE IMPACT OF THE ECP (B) COURSE ON THEIR CLINICAL PRACTISE (APPENDIX 1, PART E46)

E46 - COMMENT ON IMPACT OF ECC ON CLINICAL PRACTICE	Year 3			Year 5		
	No	Positive	Negative	No	Positive	Negative
D = Duration of course	0			1		Helps give you a grounding but we spent too little time doing it. Less time should be spent with models as it is not the same when faced with a real patients
E = Learning experience	8	Emergency Care Course has positively impacted on my clinical practise. When I'm doing my blocks I have an idea of what's expected of me & it makes my life in this medical field so much more easy	Has very little effect/impact on my clinical work.	16	I think it was an excellent opportunity to get in touch with emergency practises. It was fun & refreshing	
		It had a great impact on my clinical practise. The skills I learnt I use often in hospital, especially as part of the general exam. We don't have that much exposure 2 emergency medicine though			It made intial clinical practice in the ward easier. It was good & beneficial to apply what we learnt	
		The course helps us to understand patient care from the moment we see the patient and it helped a lot in understanding surgery & management.			It was helpful in providing us with extra confidence in the wards and giving some experience as opposed to none. However we/I was not expected to perform these tasks as yet.	
		Good Basics. But not 'practise' on real ppl			It was my first exposure to life supoprt skills. It gave me confidence, in that I feel like I will be able to apply it to a real life situation	
		Excellent experience where I received my foundations/groundings to prepare / which has prepared me for clinical practise			Helped me a lot and to be confident to do the skills on real patients	
		It helped me to understand more things on my clinical career			Satisfactory	
		It was great. Gave me a sense of what was to come & a sense of being confident in handling an emergency. Also made me feel comfortable with equipment			The course allowed me to practise & understand some basic emergency skills that I have needed in the wards	
					It was helpful in being the first exposure to clinical medicine setting	
					My first experience with the Emergency Care Course was at the beginning of my studies and I found this to be most helpful in forming a solid base for further studies.	
					It was a good introduction to medicine. Help a lot. Very beneficial	
					It improved my clinical skills. Allowed me to practise skill I was not confident in a non-life threatening arena.	

			Very beneficial - the only course that actually teaches clinical skills in old curriculum	
			Has enriched my learning experience. There skills were not taught in any other discipline so is very important	
			Very good. Still referred to the knowledge gained years after the course. Even the theory.	
			The emergency course was an excellent introduction to medical skills. These skills haven't been taught to us in such detail thereafter	
			The course gave me good clinical practice and made me comfortable with equipment	
A = Application of knowledge	14	19	it helped me to develop the skill on how to manage the patient at a primary level	it gave me a little bit of foundation
			it provided a good basis for our introduction to clinical methods at hospital	All fitting into place now. Aided in Anaesthetics training. Helps you think on your feet
			it helped in understanding the basics of clinical practise	It taught me how to react in an emergency situation. It helped me attain a certain level of confidence and competence
			Makes the theoretical aspects of medicine more realistic	It has helped me to be able to handle my patients well and to be confident when doing that.
			It has at least given me a proper approach to patients and emergency settings	Most of the skills learnt were used in the wards.
			Introduced us to the essentials of HHH ABCI	Helps give you a grounding but we spent too little time doing it. Less time should be spent with models as it is not the same when faced with a real patients
			Emergency Care Course has positively impacted on my clinical practise. When I'm doing my blocks I have an idea of what's expected of me & it makes my life in this medical field so much more easy	I think it was an excellent opportunity to get in touch with emergency practises. It was fun & refreshing
			It had a great impact on my clinical practise. The skills I learnt I use often in hospital, especially as part of the general exam. We don't have that much exposure 2 emergency medicine though	It made initial clinical practice in the ward easier. It was good & beneficial to apply what we learnt
			The course helps us to understand patient care from the moment we see the patient and it helped a lot in understanding surgery & management.	It gave me more competence when dealing with pts
			It helped with understanding basic pathophysiology in trauma situations	It has improved my competence & therefore my confidence in emergency care - I have a clear approach to emergency situations especially in theatre and in environment outside Medical school

	It made theme 1.6 very easy			More confidence on approaching and dealing with patients	
	Excellent experience where I received my foundations/groundings to prepare / which has prepared me for clinical practise			It was my first exposure to life support skills. It gave me confidence, in that I feel like I will be able to apply it to a real life situation	
	It helped me to understand more things on my clinical career			Helped me a lot and to be confident to do the skills on real patients	
	It was great. Gave me a sense of what was to come & a sense of being confident in handling an emergency. Also made me feel comfortable with equipment			The course allowed me to practise & understand some basic emergency skills that I have needed in the wards	
				It was helpful in being the first exposure to clinical medicine setting	
				My first experience with the Emergency Care Course was at the beginning of my studies and I found this to be most helpful in forming a solid base for further studies.	
				It was a good introduction to medicine. Help a lot. Very beneficial	
				Very good. Still referred to the knowledge gained years after the course. Even the theory.	
				The emergency course was an excellent introduction to medical skills. These skills haven't been taught to us in such detail thereafter	
C = Communication between Lab and Ward staff	0			0	
T = Time between Lab and real situation	0			0	
Con = Confidence to perform skill	7	Emergency Care Course has positively impacted on my clinical practise. When I'm doing my blocks I have an idea of what's expected of me & it makes my life in this medical field so much more easy		9	It taught me how to react in an emergency situation. It helped me attain a certain level of confidence and competence
		It had a great impact on my clinical practise. The skills I learnt I use often in hospital, especially as part of the general exam. We don't have that much exposure to emergency medicine though			It has helped me to be able to handle my patients well and to be confident when doing that.
		The course helps us to understand patient care from the moment we see the patient and it helped a lot in understanding surgery & management.			It has improved my competence & therefore my confidence in emergency care - I have a clear approach to emergency situations especially in theatre and in environment outside Medical school
		Haven't been exposed to all the things we learnt in the emergency care course so it's hard to assess the impact. Definitely gives you confidence though			More confidence on approaching and dealing with patients
		It helped with understanding basic pathophysiology in trauma situations			One is confident about emergency situation because it is a very detailed course

		At the moment I go to the hospital over holidays and I feel confident whenever I'm asked to perform a procedure.		It was helpful in providing us with extra confidence in the wards and giving some experience as opposed to none. However we/I was not expected to perform these tasks as yet.	
		It was great. Gave me a sense of what was to come & a sense of being confident in handling an emergency. Also made me feel comfortable with equipment		It was my first exposure to life support skills. It gave me confidence, in that I feel like I will be able to apply it to a real life situation	
				Helped me a lot and to be confident to do the skills on real patients	
				It improved my clinical skills. Allowed me to practise skill I was not confident in a non-life threatening arena.	
Com = Competence of execution of skill	3	It has at least given me a proper approach to patients and emergency settings	7	All fitting into place now. Aided in Anaesthetics training. Helps you think on your feet	
		At the moment I go to the hospital over holidays and I feel confident whenever I'm asked to perform a procedure.		It taught me how to react in an emergency situation. It helped me attain a certain level of confidence and competence	
		It was great. Gave me a sense of what was to come & a sense of being confident in handling an emergency. Also made me feel comfortable with equipment		It gave me more competence when dealing with pts	
				It has improved my competence & therefore my confidence in emergency care - I have a clear approach to emergency situations especially in theatre and in environment outside Medical school	
				The course gave me good clinical practise and made me comfortable with equipment	
				It has taught us the emergency resus. Protocol needed for us to be competent in the wards and the public	
En = Environmental factors including equipment	1	It was great. Gave me a sense of what was to come & a sense of being confident in handling an emergency. Also made me feel comfortable with equipment	1	It improved my clinical skills. Allowed me to practise skill I was not confident in a non-life threatening arena.	
AS = Assessment	0		0		
WT = Ward time - time spent with real patient	1		0	There should be more exposure to real life emergency e.g. more intakes in the ambulance base situations can be useful	
ECT = Emergency Care Tutor	0		0		
CM = Course Material	0		0		
CD = Course design	0		0		
CT = Course Content	2	Introduced us to the essentials of HHH ABC!	9	Most of the skills learnt were used in the wards.	Helps give you a grounding but we spent too little time doing it. Less time should be spent with models as it is not the same when faced with a real patients

			One is confident about emergency situation because it is a very detailed course	
			It added an essential practical component to a very theoretical cause to study	
			It has taught us the emergency resus. Protocol needed for us to be competent in the wards and the public	
			It was a good introduction to medicine. Help a lot. Very beneficial	
			Very beneficial - the only course that actually teaches clinical skills in old curriculum	
			Has enriched my learning experience. There skills were not taught in any other discipline so is very important	
			Very good. Still referred to the knowledge gained years after the course. Even the theory.	
			The emergency course was an excellent introduction to medical skills. These skills haven't been taught to us in such detail thereafter	
R = Revision of skills	0		0	

TABLE 16: 3<sup>RD</sup> YEAR AND 5<sup>TH</sup> YEAR COMMENTS/ SUGGESTIONS ABOUT THE ECP (B) COURSE (APPENDIX 1, PART E47)

E47 - COMMENTS/SUGGESTIONS ON ECC	Year 3		Year 5			
	No	Positive	Negative	No	Positive	Negative
D = Duration of course	3	The duration of the course should be more	A year is too much it is a waste of our valuable time  It is too long, should not run throughout the whole year	2	More time spent there. Focus on more complicated procedures  Emergency care should be continued throughout the medical school - old curriculum was exposed only in 1st yr.	
E = Learning experience	2	Job well done  I think it's a brilliant course but more effort could be applied to actually getting live patients on whom to practise on rather than dummies		4	It should be maintained and is important as important principles of emergency management is learnt and never taught to us in the wards  I feel that it is a module which benefits the student greatly. Future students of this course will not be short-changed if this course remains compulsory  Should be revised in 5th/ 6th year. Very helpful. Very practical	

				I feel that we should be encouraged to maintain our skills & be re-assessed at various times to show our proficiency in those skills. The course itself was well run and informative	
A = Application of knowledge	0			This course should be integrated into all years of study. As part of the old curriculum I was only taught IV cannulation in my 5th year after I had performed this skill by myself on many pts previously	
C = Communication between Lab and Ward staff	0			0	
T = Time between Lab and real situation	1		I would prefer to have had the opportunity to go and practise skills at the hospital while they were fresh in my mind in order 4 me to know if I really am competent or just comfortable with a simulated model	3	it should be done in 3rd year before clinicals in the wards begin & then refresher courses should be done, where the scenarios are played out & the emergency is managed, each year
					the course should be continued beyond the 1st year & definitely in the 3rd year of study. Certain skills like IV cannulation & venipuncture should be introduced before debut into the wards
					Should include methods of venipuncture & IV cannulation & catheterization before we go to wards & learn bad methods
Con = Confidence to perform skill	0			0	
Com = Competence of execution of skill	1		I would prefer to have had the opportunity to go and practise skills at the hospital while they were fresh in my mind in order 4 me to know if I really am competent or just comfortable with a simulated model	1	It should be maintained and is important as important principles of emergency management is learnt and never taught to us in the wards.
En = Environmental factors including equipment	1		I think it's a brilliant course but more effort could be applied to actually getting live patients on whom to practise on rather than dummies	3	Need more time for practicing (skills lab always seems busy). Need more equipment for students to practise on
					Smaller groups. More time to practise & a larger LAB with more equipment
					More space is needed as there is too many of how at medical school
AS = Assessment			In terms of examiner's get people who will be on the level with all students listen to what they have to say & not intimidate & make the whole exam atmosphere horrible. People who are considerate & passionate for their students & work.		

			Examinations should not around the same time as course exams		
WT = Ward time - time spent with real patient	0			0	
ECT = Emergency Care Tutor	1		I would suggest that protocols for different emergencies are made not all, maybe the main ones like: the fitting patient, MVA etc. This will also standardise what tutors teach, as there were many disparities from tutor to tutor with regard to their approach to specific scenarios.	1	I feel that we should be encouraged to maintain our skills & be re-assessed at various times to show our proficiency in those skills. The course itself was well run and informative
CM = Course Material	1		I would suggest that protocols for different emergencies are made not all, maybe the main ones like: the fitting patient, MVA etc. This will also standardise what tutors teach, as there were many disparities from tutor to tutor with regard to their approach to specific scenarios.	0	
CD = Course design	0			8	I feel that it is a module which benefits the student greatly. Future students of this course will not be short-changed if this course remains compulsory
					This course should be integrated into all years of study. As part of the old curriculum I was only taught IV cannulation in my 5th year after I had performed this skill by myself on many pts previously
					Emergency care should be continued throughout the medical school - old curriculum was exposed only in 1st yr.
					Should be revised in 5th/ 6th year. Very helpful. Very practical
					Should be intergrated in the course and be refresher courses to that.
					the course should be continued beyond the 1st year & definitely in he 3rd year of study. Certain skills like IV cannulation & venupuncture should be introduced before debut into the wards
					it should be done in 3rd year before clinicals in the wards begin & then refresher courses should be done, where the scenarios are played out & the emergency is managed, each year
					The course was intensive in 1st year - an effort should be made to repeat it possibly in 3rd/ 6th year
CT = Course Content	0			5	It should be maintained and is important as important principles of emergency management is learnt and never taught to us in the wards. Perhaps introduce more skills like IV lines

				I feel that we should be encouraged to maintain our skills & be re-assessed at various times to show our proficiency in those skills. The course itself was well run and informative	Should include methods of venepuncture & IV cannulation & catheterization before we go to wards & learn bad methods
					More time spent there. Focus on more complicated procedures
R = Revision of skills	0		8		Should be intergrated in the course and be refresher courses to that.
					it should be done in 3rd year before clinicals in the wards begin & then refresher courses should be done, where the scenarios are played out & the emergency is managed, each year
					I suggest that the course in done once, that is it was done in first yr so there is no good reason for us to do it in 6th year again however, it is good to revise or to practise but not to be re-assessed on it.
					There should be revision into the later years, just as we are about to graduate. Just to refresh.
					Should be revised in 5th/ 6th year. Very helpful. Very practical
					I feel that we should be encouraged to maintain our skills & be re-assessed at various times to show our proficiency in those skills. The course itself was well run and informative
					Should have refresher courses every year even if it is only for 2 days a year
					The course was intensive in 1st year - an effort should be made to repeat it possibly in 3rd/ 6th year

**INTERVIEW SCHEDULE**

**TOPIC:**

**INTEGRATING EMERGENCY CARE INTO THE MBChB, PROBLEM-BASED LEARNING CURRICULUM AT THE NELSON R. MANDELA SCHOOL OF MEDICINE, UNIVERSITY OF KWAZULU NATAL: STUDENT AND STAFF PERCEPTIONS**

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**KEY QUESTION/ PURPOSE OF INTERVIEW:**

**What are the staff's perception on the role of the ECP (B) Course in the MBChB Curriculum and its effects on the clinical ability of the traditional students versus those of the PBL students?**

- 1. Are you familiar with the ECP (B) Course that is taught in the first year of the MBChB Curriculum?**
- 2. Explain your perceptions on the content that is covered by the Course with emphasis on the practical component.**

**Ward Tutors**

- 3. Do you believe that the Course has had an impact on the student's clinical ability on real patients?**
- 4. What are your perceptions of the Curriculum 2001 (PBL) students ability to perform clinical skills on real patients?**
- 5. What are your perceptions of the 5th year students ability to perform clinical skills on real patients?**
- 6. Are you able to differentiate between the PBL students and the Traditional students based on their ability to perform clinical skills on real patients?**

**Lab Tutors**

- 3. Do you believe that the Course will have an impact on the student's clinical ability on real patients?**
- 4. What are your perceptions of the Curriculum 2001 (PBL) students ability to perform clinical skills on simulated patients/ models?**
- 5. What are your perceptions of the 5th Year students ability to perform clinical skills on simulated patients/ models?**
- 6. Are you able to differentiate between the PBL students and the Traditional students based on their ability to perform clinical skills on simulated patients / models?**

**Both Ward Tutors and Lab Tutors**

- 7. Elaborate on your response to the above question and also highlight some examples of how they are different (if they are different)**
- 8. What is your view on how medical students should be taught clinical skills?  
(When - time during the programme)  
(Where? - Wards/ Lab)  
(How? - on real patients/ simulated patients/ models)**

**Examples of clinical skills:**

- open airway manouvres
- Use of the bag valve mask, 40% venturi mask
- taking pulses, blood pressures, assessing breathing & other vital signs
- recognition of shock - skin colour & temperature
- performing haemoglucotests
- assessing GCS
- Perform CPR
- Perform a foetal and placental delivery

## **Appendix 5: RESPONSES FROM LAB TUTORS**

### **INTERVIEW TRANSCRIPTS**

#### **TOPIC:**

**INTEGRATING EMERGENCY CARE INTO THE MBChB, PROBLEM-BASED LEARNING CURRICULUM AT THE NELSON R. MANDELA SCHOOL OF MEDICINE, UNIVERSITY OF KWAZULU NATAL: STUDENT AND STAFF PERCEPTIONS**

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#### **KEY QUESTION/ PURPOSE OF INTERVIEW:**

**What are the staff's perception on the role of the ECP (B) Course in the MBChB Curriculum and its effects on the clinical ability of the traditional students versus those of the PBL students?**

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#### **INTERVIEWS WITH LAB TUTORS**

**The Interviewer introduced the topic and stated the key question.**

**The Interviewer asked for permission to record the interview. Consent was given by all the interviewees.**

**1. Are you familiar with the ECP (B) Course that is taught in the first year of the MBChB Curriculum?**

**Lab Tutor 1:** Yes, from what I remember, it's been a two-week programme of emergency clinical methods routinely done, I think at all Medical schools including the old and new curriculum

**Lab Tutor 2:** Yes, I am familiar with it as I work in the Lab and I've seen it being taught and I've seen the students practicing a lot as well, so I am very familiar with it and I have also helped in the assessment of those students at the end of the year.

**Lab Tutor 3:** yes, I am very familiar with the course, over the last two years, I've been working here in the capacity of a clinical skills tutor in the same facility where the Emergency Care course is taught, so I am familiar with it and the content and I have become familiar with it over that time.

**Lab Tutor 4:** Yes, we have been exposed to it during certain times in the year. We are asked to do the clinical teaching, these have come to the front, the competencies is noted.

**Lab Tutor 5:** Yes, I am familiar with the course because I was involved in the teaching last year in the Lab at Medical school.

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**2. Explain you perceptions on the content that is covered by the Course with emphasis on the practical component.**

**Lab Tutor 1:** Traditionally the older course covered more First Aid and Emergency Care methods. With respect to the newer course, it's integrated more clinical skills in collaboration with the underlined modules or clinical programme that the students are studying at the same time as well. That was what we have been tutoring when we were doing 1st, 2nd and 3rd year students. The clinical methods are done over certain modules concentrating on what's appropriate for that system at that particular time. So the student has a more broader understanding of the need for

certain practical skills, the purpose of it and how it applies to a particular patient in that setting. As opposed to previously when it was just a first year course over two weeks without any prior knowledge to the actual clinical conditions that we were doing

**Lab Tutor 2:** Essentially I think that this is a very important part of the curriculum and as far as the content is concerned, I think that it brings benefit to the students around and it makes students much more confident in all their skills that they encounter. And these are the basic things we ought to know as doctors, these emergency skills because often what happens is when you work in hospitals without having any prior emergency experience, you tend to shy away from the emergency cases because the basic things are not practiced very much at medical school. We always talk about.. or there is a lot of emphasis placed on management of patients but more chronic long-term management forgetting about the emergency management and this would obviously improve the lifespan of the patient and reduce morbidity and mortality so I think whatever is being covered in the course is extremely vital.

**Lab Tutor 3:** The course covers everything from basic CPR to fairly high level of equipment use, defibrillation, dealing with infant resuscitation and so on. The practical component is very detailed. I think it is confidence inspiring because the technical nature of the skills requires a fairly detailed knowledge of various forms of equipment and of various procedures. And I think the repetition and the stepwise teaching of the skill has been a benefit to the students. From a personal point of view, we were never exposed to this type of equipment on any type of hands-on basis until we were at a level when we were interns and then it was a case of somebody showing us how to use the equipment and then proceeding. So the practical content is in depth and most of the equipment is provided which gives a student a chance to familiarise themselves with it on a hands-on basis.

**Lab Tutor 4:** Of the exact content, I am not well aware, but the perception is not based on a feel, but is based on a fact that the content that is covered in the course with the emphasis on the practical component is a very valuable one and the students have enjoyed that aspect of the course as well as it has come to the fore when doing the skills component when teaching medical students. So my answer is 'yes', I think the content is well structured to the level of the student and very informative and valuable in the later years.

**Lab Tutor 5:** I think that the content is very extensive as well as intensive and looking at the examples of the skills that are taught, I must say that they are very relevant, because ninety percent of our teaching in the Outpatient, consists of resuscitating patients, both adults as well as children. Resuscitating babies with gastroenteritis and respiratory distress will come in in circulatory failure and respiratory failure and all these techniques that they have been taught is the Open airway manoeuvre, the use of the mask and the recording of pulses, the recognition of shock. All these are very relevant to their training in the Outpatient department as well as the Casualty department.

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**3. Do you believe that the Course will have an impact on the student's clinical ability on real patients?**

**Lab Tutor 1:** In terms of understanding and application of the the actual skill, I think the student has a much better approach to a patient. They have a more methodical approach in the sense that they understand, as I mentioned, the background problem, the physiology of the patient itself, and the need for that clinical methods, that application. But with respect to the actual course, I'm not too familiar with how much of integration is done in the wards at that particular time when the skill is taught in 1st or 2nd year and then integrated with hands-on in 5th year or 6th year. I think the students will benefit more from a hands-on approach, hands-on experience with actual patients in the wards. Obviously not in an acute setting where the patient requires emergency care that will be left for qualified medical officers but at least to observe the management of those types of patients. Certain procedures that are practiced on models are not exactly as we would expect in a clinical setting and I think where we may fall short is that if you leave a space between the time

when the procedure has been taught and when the skill is actually applied we may fall short in applying that correctly.

**Interviewer:** So time has elapsed between them being taught on the model versus them performing the skill on real patients?

**Lab Tutor 1:** Emergency situations. Another problem is that when you practicing a particular type of skill, the student is not under any pressure to perform that skill in an emergency setting and when they applying this on an acutely distressed patient, psychologically that tends to have an impact on their ability to perform the skill.

**Interviewer:** So application in a real life situation is much more stressful?

**Lab Tutor 1:** Yeah.

**3. Do you believe that the Course will have an impact on the student's clinical ability on real patients?**

**Lab Tutor 2:** Yes, definitely because what happens when the students are here in the lab practicing emergency skills on simulated patients and on models and so forth, they gain this amount of confidence which does them a world of good when it comes to real patients. I know personally from looking at the traditional curriculum, we didn't do much emergency care and you tend to become very scared of approaching patients, you know, in emergency situations where as these students here, because they have the confidence here in the Lab, that confidence is transferred to the real situation. So it definitely improves their alround clinical ability in approaching patients

**Lab Tutor 3:** Yes, I think it will have a great impact on the students clinical ability. Obviously it needs to be run in tandom with backup sound theoretical knowledge which is provided in other areas of the curriculum but I think in terms of clinical ability, it will boost their confidence and make them able deal with situations which otherwise could be pressurising in a more clear headed way than they would have had they been exposed to that previously.

**Lab Tutor 4:** No doubt. The skills that are taught at that level, when the express themselves on the models that are available, you can see the skills coming to the front as versus the traditional students, of which I am myself, so the impact on the skills offered by the ECP is no doubt a valuable one and the execution of the skills will no doubt impact on the future MBChB students.

**Lab Tutor 5:** Yes, I do think I had answered this to a large extent in the preceding question and I think its very important that they are taught all these manouvres because as I have said, ninety percent of the training and their practical experience at King Edward the Eight Hospital, consists of practical maneuvres such as recognising shock, assessing the GCS and performing the CRP and also performing foetal and placental deliveries. So I do think that this course has an impact on the students clinical abilities on real patients in their clinical years.

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**4. What are your perceptions of the Curriculum 2001 (PBL) students ability to perform clinical skills on simulated patients/models?**

**Lab Tutor 1:** I think in comparison with the old curriculum, which I had studied under, I found that the students' knowledge, maturity level, their ability to apply clinical methods is a lot more advanced. They tend to feel more confident because they applying a method they have a basic understanding of. They are able to reinforce the actual skill with the background history. So definitely, it is a more comprehensive approach. Because it is distributed over three years in the new curriculum, I think they tend to reinforce the methods that we are using. They tend to apply it

more appropriately as well. As opposed to giving a 1st year student who has come out of matric with no prior experience or knowledge of a clinical setting .....

**Interviewer:** Well, actually it is over the first year. Two weeks versus the first year integration. So at the end of it you are saying that the PBL students are able to have a better understanding and put things more in perspective.

**Lab Tutor 1:** And we reinforcing these skills throughout the year as well before the exams and even in the final at the end of the year when ew inco-oprating everything

#### **4. What are your perceptions of the Curriculum 2001 (PBL) students ability to perform clinical skills on simulated patients/models?**

**Lab Tutor 2:** Well, you know the curriculum definitely, initially, I think with anything has it's teething problems but with time in the last two years, I have seen it improve drastically and infact I wish that I actually had this kind of teaching in that I was shown these clinical steps and clinical skills step by step which definitely enhance your clinical ability. But looking at this particular curriculum, I think that we can be guaranteed that these students are so efficient on models they definitely going to be efficient on patients because as I said earlier, their confidence is transferred from models to patients. Their ability.. I've assessed them on numerous occasions in the clinical skills exams and you can definitely see the benefit of the emergency skills coming into the clinical skills as well. In that the ability to carry out things smoothly and evenly from A to Z under pressure which is often what happens in emergency situations. You know you pressurised and you gotta do things properly from A to Z and I see that happening and impacting on their ability. They have a better stepwise approach, a methodical approach.

**Lab Tutor 3:** The students are showing an increasing ability ,1st year, obviously they are coming from different backgrounds, and the ability level is extremely varied. I think with the continuity that is provided with the tutors who know students from year to year, we able to provide a more add-on approach to the skill. We are aware of what level they've reached and we keep on reinforcing and building a skill. This seems to be an advantage of having resident tutors as opposed of tutors who come and go and who are exposed to students and are not sure which level to pitch the information and the actual practical part of the skill. I think that with us being resident now, over two years more or less, we have been able to assess the students need and respond to those and I think we are seeing a good response in terms of the hands on ability of the student I feel I can even see a difference in those that we have been exposed for the two years and I feel that sometimes we pick up gaps in the 3rd year knowledge and I feel that we are plugging the gaps with our new approach. So their ability to perform the clinical skills is rudimentaryat the beginning but steadily improved throughout the time they've been at Lab-based skills.

**Lab Tutor 4:** Well, I don't have perceptions, I have facts on hand because I have been a tutor on the clinical skills and one, is that the content of those skills are structure very well, they are basic and they are essential. They are not over the board with small prints, they are what an ordinary GP would be required to use and the students ability to perform these skills on simulated patients and models have been excellent. Outcome is excellent.

**Lab Tutor 5:** Well, having worked with them last year, I was really amazed at their abilities. Because, I must say that even as an intern in my first year after qualifying, I did not have the confidence that they possess and the ability to intubate patients and to put up drips and to resuscitate. They were really tremendous, they were amazing.

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#### **5. What are your perceptions of the 5th year students' ability to perform clinical skills on simulated patients/models?**

**Lab Tutor 1:** I think in the older curriculum generally that certain group of students we find that, well some of the students that I've come across they tend lacking in certain skills because they

haven't applied these which they should have been applying in 4th year anyway. As opposed to a 1st year student who by the end of the year should be assessed on an actual simulated patient. They feel more confident when performing the skill. However, I must say that it is a bit difficult to compare a student whose performing basic clinical methods on a simulated patient as opposed to a student who may be expected to do this in the high care setting unfortunately we cannot. The only simulation we can afford them in emergency situation would be on a model in terms of intubation, CPR. And as close as a model is to an actual patient, it's not the same so as I mentioned earlier the level of confidence and the ability to work under stress or that requires emergency support is a bit difficult to measure

**Lab Tutor 2:** A lot of them are not used to this kind of assessment so you find them being very, very nervous. Infact you can see them trying to adapt from their traditional method to the now stepwise approach and it is definitely going to benefit them. But I do see infact the 1st years and 2nd years and 3rd years who have been in the PBL kind of teaching method are more confident with these kind of skills and the 5th years are not as used to practicing on models, but I think with time, they will improve and they have actually improved from the beginning of the year.

**Interviewer:** So you they are not as confident? Do you think that they may need like a refresher course before coming back in 5th year to do courses using the Lab?

**Lab Tutor 2:** No, I don't think necessarily 5th year, you're talking about the current 5th years? The thing is you're not questioning their ability but they are more anxious, they not as confident so maybe by the end of next year when they actually leave Medical school, they would have gained all that confidence. But you can see that they are coming into this new kind of teaching and this new kind of learning and it will benefit them. I'm not questioning their ability, but their approach, they are more nervous.

##### **5. What are your perceptions of the 5th year students' ability to perform clinical skills on simulated patients/models?**

**Lab Tutor 3:** Well, I'd respond to this question by saying that the first time, I've been exposed to 5th years here, in an assessment, I was astonished by how much difficulty they experienced with the skills in comparison with the younger students that I had been tutoring in the skills lab. I have subsequently seen them again in certain areas and I think with the emergency are course been stressed in association with Anaesthetics, that they have also shown a great deal of improvement. But in the clinical skills area, I definitely notice a discrepancy between the two groups of students.

**Lab Tutor 4:** I can't comment on the current students, but from previous years the ability of traditional students to perform clinical skills will depend on the exposure at the level of the ward and if the student endeavoured to do research and chose to actively participate. They had the opportunity to visit casualty and the wards to see what the registrars are doing, the junior, the senior, to witness in the theatres etcetra. If they have taken that to heart instead of just relying on the books, then certainly they would learn the skills but if they have learnt the skills at year one level, I think that that would be an added advantage for them. Cannot comment on their ability to use the models, they are not exposed to them.

**Lab Tutor 5:** Well, I think that this is the same ability that I had as a Medical Officer in my first year as a Medical Officer, lacking in confidence and I'm sure that myself that hanging onto my registrar at every turn. So I must say that they are not really prepared for the practical aspect of medicine.

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##### **6. Are you able to differentiate between the PBL students and the Traditional students based on their ability to perform clinical skills on simulated patients/ models?**

**Lab Tutor 1:** Eventhough I haven't been in a similar situation where I've got to compare a traditional student with the old curriculum, I think in comparison with myself personally, I've

trained on the level that we were on 1st and 2nd year clinical methods, I think that definitely the new curriculum students have a much better advantage. The problem is that when we did the two-year Emergency First Aid course we never got the opportunity to apply any of these methods until 4th year and we obviously needed a refresher course for basic life support management. The newer students, I've seen them working on simulated models, I've seen their confidence and ability to perform which even some 5th years and 6th years are unable to perform and I think definitely they have more of an advantage, they more confident in their ability.

**Lab Tutor 2:** Yes, I am able to differentiate between the two. You can see the method of teaching coming out when you see them practice. You can see the 5th year students haven't been taught in this way where you have to carry out things from A to Z and I think that they were taught how we were taught, where you watch something and you learn by watching somebody do one and then you do one and then you show somebody else okay, that's how they learn procedures and you can see that difference in confidence between the two years when it comes to dealing with models and patients and emergency situations. So that's how I'd be able to differentiate between the two.

**Lab Tutor 3:** Yes, in my opinion, I think we can clearly differentiate between the two groups of students. The younger students are more confident, they are more aware of empathy, they are extremely aware of the fact that they need to consider their patients' feelings, their ability in terms of communication skills in terms of their greetings, confidentiality, insuring that the patient is examined in an environment where she feels comfortable. I think these are all the things that show strongly in our younger students as opposed to the older students. Again, a little anecdote, we assessed some Family Medicine students from the old curriculum and we used some younger students as simulated patients in an HIV counselling scenario and the students actually commented that they were surprised at the approach of the Family Medicine students to them and they actually pointed out some gaps in very vital areas that the older students had not been aware of. So, yes, the answer to that is there is a difference in these two groups of students.

**Lab Tutor 4:** To tell you the truth, I have not been exposed to differentiate one group versus the other group. My knowledge on that is very limited.

**Lab Tutor 5:** Definitely. There is a vast, vast difference between the PBL students as versus the traditional students.

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**7. Elaborate on your response to the above question and also highlight some examples of how they are different (if they are different)**

**Lab Tutor 1:** With all basic life support courses, you need to take, given the advanced body life support require a two-year refresher course anyway. With these students they are integrating these things throughout the curriculum so they reinforcing it. I haven't seen many of the students after they have qualified working as doctors in the wards. I think the first lot will be graduating this year or next year so as far as their clinical competence is concerned we have yet to establish how much of an impact we have on them.

**Suggestion, I'm not sure if it is appropriate to the interview and the study but students also tend to rotate through the wards during 1st and 2nd year just to observe certain situations. I'm not sure how much observation or exposure they are getting to emergency situations which is what the study is based on. Are they also having any video presentations of actual emergency settings or trauma units, where these procedures are being performed and under what conditions these students are expected to perform these skills**

**Lab Tutor 1:** I'm not sure whether they do caratory duties but I know they do trauma or ambulance shifts.

**7. Elaborate on your response to the above question and also highlight some examples of how they are different (if they are different)**

**Lab Tutor 2:** I suppose with the 1st years and the 2nd years of the PBL curriculum, because they have been taught in this manner, they have protocols and so forth, they're very confident with the learning material, in fact, they know all the steps from A to Z, by heart. And they've been practicing a lot on models, they have more exposure to the models so when you see them in the assessment, they can do the skill more confidently and much more quicker whereas when it comes to a 5th year student, for example, in an assessment, they would be much more nervous and anxious, as I said, and at the same time, they would leave out much more of the crucial steps not that they probably did not know it but that they do that step but not mention it to you, so as I said the ability is not very different but how they approach the skill.

**Lab Tutor 3:** n/a

**Lab Tutor 4:** N/A

**Lab Tutor 5:** Firstly, I find that the traditional students are walking textbooks, in that they seem to know all the theory and physiology behind the problem and the pathology, but they lack that practical ability to really deal with the patient and also they lack the confidence which the PBL students possess.

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**8. What is your view on how medical students should be taught clinical skills? (When - time during the programme) (Where? - Wards/ Lab) (How? - on real patients/ simulated patients/ models)**

**Lab Tutor 1:** I think given the fact that these students are still in 1st and 2nd year and they initially just begun their exposure to clinical medicine, ideally a student should be trained first in the Lab on simulated model or patient where their skills can be reinforced, where they can find the confidence to be able to do these skills routinely and at the same time they should be then integrated into a ward setting where they can see senior doctors perform these skills and then maybe even attempt certain non-acute procedures on patients. Obviously with 1st year students that may be difficult to expect of them hands-on on some of the patients, given the risks involved in performing some of these procedures but with low risk procedures, I think, by 2nd year they should be expected to start performing these skills.

Okay, so you say that they should be taught in 1st year, in the Labs, on simulated patients and then they should, in 2nd year be able to do this on real patients, supervised of course. And you saying that they should be taught on models, simulated patients first and then in wards.

**Lab Tutor 1:** At the same time I think that with any clinical method even right up to 5th year, you need to have the facilities of the Lab available to students. Even as a postgraduate student you need to go back to the Lab in case you need to practice certain skills. You don't always get the opportunity to do these on real patients. Which most consultants will disagree with as well. So to practice on real patients, a total no-no.

**8. What is your view on how medical students should be taught clinical skills? (When - time during the programme) (Where? - Wards/ Lab) (How? - on real patients/ simulated patients/ models)**

**Lab Tutor 2:** Actually, I think that the clinical skills are being taught in a very nice way at the moment. It's been fitted into their timetable in terms of themes and so forth with the skill being relevant to that particular theme. The Lab-based skills are essential in their training because as I said it builds your confidence, imagine going to perform a skill like catheterisation on a real patient for the first time which is what we did when you not so confident in the skill, you've never

done it on anyone before. It not only improves your ability but it also makes the patient less anxious because they can see that you are more confident in the skill, you've done it before and it make everything much easier. Just for ethical reasons alone, practicing procedural skills on models in a Lab-based situation is the ideal scenario and obviously these skills would have to be reinforced in the clinical situation where they can then practice what they've been taught. It's no point them being taught and then not following up in the wards. So there's got to be a close link between the two.

**So what do you think the close link should be? Should they be taught the skill in the Lab and then observe and or perform the skill in the ward in the same week? Is it okay to have a time period?**

**Lab Tutor 2:** Ideally, I think the closer the better, isn't it? And maybe as you said now, observing might be a better idea because practicing on the models and then straight away doing it on a real patient may not be such a great idea. So maybe as you said, practice here in the Lab, for maybe history taking for example, practice the history taking on simulated patients, then go in the wards and have somebody more senior take a history and you sit in on it to see how you can apply what you've learnt in the Lab in the clinical situation. An obviously with time as you sit in on more history taking sessions or watch more catheterisation, your confidence is built even further and then you'd be allowed to practice on a real situation

**8. What is your view on how medical students should be taught clinical skills? (When - time during the programme) (Where? - Wards/ Lab) (How? - on real patients/ simulated patients/ models)**

**Lab Tutor 3:** I think introduction in the 1st year is a very good thing. In the present situation, I personally think that we have too little time with the first years. The reason being that they need a lot of theoretical information and background before they can get to a hands-on approach unless they are doing something by rote, which is not what we want them to do. We don't want them to start early without knowing why they are doing it or what they are looking for. Also with clinical work there is a vast array of pathology that they are dealing with and in order to highlight symptoms and signs of a certain condition they need to be made aware of that. They need to be made aware of basic Anatomy, basic physiology. I think in principle, the amendments to the new curriculum are going to help in that area but nonetheless I think we would like to have longer sessions with clinical skills in 1st year, because having that background we can take it forward and rapidly introduce clinical skills that are relevant to the areas that they're covering, so that they're exposed to it, they can see it, they can practice it and they can actually assimilate it very early on in their approach to clinical practice. Again, I studied a long time ago and we did not have any exposure to this type of skills until we came to 4th year and I see a great benefit to getting the students exposed this early. It helps them to look into the future and understand what they're dealing with. It doesn't live them in the theoretical world for three years before they actually face what their lifetime work is going to be. And I think they can understand as they proceed, the different aspects of clinical examination and learn the relevance of these as the theoretical content is built up. So I would still say, first year is important, clinical skills can be introduced, I personally think the first years need more time, because as they get into 2nd and 3rd year they have a basic understanding of history taking and procedural examination. So one does not need so much of content, because they can apply previous learnt knowledge. Also they can apply the step by step, they have had some approach to cardiovascular in first year, and so if they are proceeding to the next level of cardiovascular skills, you don't have to go back and cover what was taught. As to the question of where, I think the wards should be introduced at a later stage, I would say 3rd or 4th year, 1st and 2nd year the Lab based skills are very important but I think, emotionally, those students are not ready to be exposed to students. I think they need to get more core knowledge, a bit more confidence and maturity, for their own sakes and for the sake of the patients. So they know just how to approach the patients and they have that edge which certainly develops in the first two years of University life. So, I think we can continue having Lab based skills early on, in 1st, 2nd and 3rd year, perhaps a co-ordinated approach of introducing the students in 3rd year and then in

4th year going to the wards. I also think it's extremely important that we build up a rapport with the Lab-based tutors and the ward based staff so that we can adopt the continuing add-on approach to what we've done as we hand them to the ward based tutors. Here, I think there is a gap in communication on the part of the staff, and I think if the students go that side, they very often can say 'we haven't done this' for example when they have done it, so if we have an openline of communication, I think we would find the programme will improve. And then in terms of how, what we doing at the moment is exposing students to models, where we can, we bring in real patients. I think bringing in real patients to the Lab is fantastic. I really think it helps the students to see us as clinicians talk to patients and they get an opportunity to talk to the patients. The opportunity that we have had to go to Outpatients with the students, I think have been valuable as well, but I don't think that they should be made to go into that situation without tutors - they not up to doing that yet. Simulated patients have been a big question for us, again, extremely valuable, as long as they are correctly briefed. You need to have a certain type of person for a simulated patient. Sometimes I think simulated patients put their own turn on a particular case and that in itself can be confusing for a student, so we need to make quite sure that our simulated patients are standardised and we limit the amount of information that they can give cos otherwise, the simulated patient might not be the ideal. Then if you can have the real patient it's fantastic because the real patient will tell us how it is, the simulated patient has to somehow plug in gaps if we haven't given them all the information and they might not know how to do it. As a doctor, if I had been put in a position of being a simulated patient, and if I had been asked a question that hadn't been in my briefing I know how to respond to it because I know what was E19 supposed to be in the scenario. So, yes, I think that they are useful but I think we can carry on perfecting the way we use the simulated patients.

**Lab Tutor 4:** I think thus far, the teaching of the medical students, starting at year one is very advantageous to them because it is a continuum when they get into the real course of the programme offered to them. The applicability of the skills taught at that level to them, makes them not vulnerable at all but gives them strength in the areas of weakness that one would see in the traditional students. And the fact that they are visiting rural areas and clinics, these skills can be used as well as at home these skills can be used, they are not afraid, when anyone is getting choked, they are able to do something to intubate them and put a forcep down the throat and be able to pull. So that the fear factor is largely reduced and during the programme, depending what programme is being offered at the time but I think that this Basic Ambulance which is little at a higher level is being pitched at the right time, at the beginning of the year when they start the learning. And they are both learning in the Lab, which is a good idea, it helps to get the fear factor out and then confidence and favourability when they go into the wards so the patients won't mumble and say we have a learner here and he does not know what he is doing. Rather have somebody who knows something and gives patients the confidence at the same time. So I think that the Lab first and then the wards is a valuable experience. And they should be taught on models first, which I think is valuable, to give them an idea and then on simulated patients and then on real patients, when as I said at the beginning, if they make that endeavour to go into the hospitals and clinics and put into practice what they've learnt, then I think they have everything wrapped up. I think that will be the core medicine that they should know and the practicality thereof, will stand them in good stead amongst the GP.

**Lab Tutor 5:** As far as when, the time, I thought that the certain aspects that they had been taught, for example, in teaching them the ECG, I found that they lacked the real knowledge behind it for example, I could teach them what signs to look for in a Myocardial infarct or in a conduction defect but they could not really understand the pathophysiology behind it, because they did not know the basics such as where the conduction system is situated, what the conduction system is, what the myocardium role is, so I do think that it is essential that they should be first taught the physiology and the pathology before they venture into the clinical medicine. I think that both, Lab and Wards have a role because there are certain aspects we need to teach in the Lab and the clinical features and signs and symptoms of disease which we could teach in the ward. So there is a role for both places. I think that the Lab can be used to teach signs on the models and also the other aspects which we could teach them in the Lab is the intubations and putting up of IV lines, procedural skills. Whereas when it comes to the real clinical skills like showing them colour and

synosis and colour and jaundice and how to feel for a big liver or a big spleen or big kidney and what is heart failure, I think that those skills should be taught in the ward on live patients. I think that we should start of with models and then go onto real patients but then it is two seperate situations. Because with real patients, you are teaching not only signs and symptoms and not only clinical features, but you are also at the same time, ethics, you know, the bedside ethics. So therefore, I think you teach them on the models first and then graduate to the real patients. Sure, simulated patients are useful.

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## 9. Comments or suggestions

**Lab Tutor 1:** No, nothing as yet. As I said, I just did the tutoring a year ago and have yet to see the students in a clinical setting, applying the skills to see how confident they are. I think it would be interesting to see the students, once they have qualified to see how they perform as interns and a group of patients to compare the traditional interns and community service doctors.

**Lab Tutor 2:** I think that it definitely has an impact on the MBChB curriculum and it should have been introduced from day one from the time we had such a thing as medical students because it is very important. The one thing I'd like to say is that students need more time, because they are 1st year students just coming out of school and sometimes this can be a lot of information to assimilate in a one-hour time slot and there is less time to practice soon after a skill and if you learning something like a scoop stretcher for example, which has minor details or tractions, you need time to consolidate and reinforce that information. Because somebody shows it to you, you have to understand it very well, before they show it to you. you've got your notes at home but you forget how to do it because you don't have the equipment on hand. But if somebody shows you and you practice it straight away, you consolidate your information and correct any misconceptions that you may have had and clear it up right away. So also the Emergency Care skills carried out throughout the year, but by the time it comes to the end of the year, I think they tend to forget what they did at the beginning of the year, so maybe if the Emergency Care course was over a six month period instead of a year, it would be easier for the student, you know with allowing him more continuity instead of spread over the year.

**Lab Tutor 3:** It has impressed me that these students have been exposed to the emergency skills. For example coming in and assessing the CPR Skills on Saturday, it is impressive to see a 1st year student, who if they are confronted with the situation in the outside world would be able to respond to the situation and be able to assist. This is in contrast to other students and practitioners who due to lack of practice, lack of confidence and fear are not prepared to intervene in situations and we've all heard of situations where people say I don't want to have my doctor's label, I'd rather be anonymous. And I think it's not that people don't want to help, they don't want to be put on the spot. And these students being exposed so early on is giving them much needed confidence which is fantastic. I think it can only stand them in good stead. The details of the technical skills that they're being exposed to are also important because they gonna get out there and they not going to rely on other people to check the equipment. And again we go to Congresses where there are major disasters because the equipment was not checked.

**Lab Tutor 4:** Not asked

**Lab Tutor 5:** I found that this was an excellent course, which I had not been exposed to before. It made me think back on those years when I graduated and went into the ward and how green I was and how unsure I was of myself, with no confidence and I had no perception of ethics, I thought it was my right to go to a patient and peel off the blanket and start palpating the patient. It was only after doing this course that I was taught the real ethics behind it and how these students were first taught, not to expect that they had a right over the patient but they were taught to treat the patient with respect and dignity, which I must say was very lacking in our years. The second aspect is that I think that these PBL students are so much more confident than I was, because the first night that I was left alone without my senior, I was terrified, because what if a patient came in who needed resuscitation, that was my big fear because I wouldn't know what to do if the patient

needed intubation. And when this happened to me, I didn't even know how to hold the tube and what to do, I had to phone up to theatre and ask the Anaesthetist to please come down to Casualty and please help me now. This was how it was. i realise how important that the patients are attended to, by a doctor who is confident and who is sure and knows what he is doing. So I think that this is an excellent course, I think that medicine cannot be taught without this course anymore. This course is an introduction to medicine.

## **Appendix 6: RESPONSES FROM WARD TUTORS**

### **INTERVIEW TRANSCRIPTS**

#### **TOPIC:**

**INTEGRATING EMERGENCY CARE INTO THE MBChB, PROBLEM-BASED LEARNING CURRICULUM AT THE NELSON R. MANDELA SCHOOL OF MEDICINE, UNIVERSITY OF KWAZULU NATAL: STUDENT AND STAFF PERCEPTIONS**

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#### **KEY QUESTION/ PURPOSE OF INTERVIEW:**

**What are the staff's perception on the role of the ECP (B) Course in the MBChB Curriculum and its effects on the clinical ability of the traditional students versus those of the PBL students?**

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#### **INTERVIEWS WITH WARD TUTORS**

**The Interviewer introduced the topic and stated the key question.**

**The Interviewer asked for permission to record the interview. Consent was given by all the Interviewees.**

**1. Are you familiar with the ECP (B) Course that is taught in the first year of the MBChB Curriculum?**

**Ward Tutor 1: Yes, I am.**

**Ward Tutor 2: Yes, I am familiar with it because I have been in contact with students who have done it.**

**Ward Tutor 3: Yes**

**Ward Tutor 4: I am**

**Ward Tutor 5: I am actually familiar with the course, and largely because I was involved with the planning of the first year of the curriculum**

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**2. Explain your perceptions on the content that is covered by the Course with emphasis on the practical component.**

**Ward Tutor 1: My perception is that the course is well structured and it prepares the students for what they will be faced with in the clinical setup. That they do not arrive in the wards, totally ignorant about aspects of emergency care medicine. The component that you cover are all essential to them and it makes it so much easier to teach them, knowing that they had exposure to this in the laboratory situation, so in my mind this is an excellent and an essential part of their training and it is highly recommended that this course should be done by all students in preparation for what they will face in the clinical situation.**

**Ward Tutor 2: I think the course is important in terms of learning practical skills with regard to each system that we are doing. A lot of people are academically able to tell you lots of things with regards to emergency assistance to patients have no clue what to do. So I think it is important and**

I think the clinical aspect like respiratory, emergencies and taking care of airway, extremely important especially in our capacity as doctors.

**Ward Tutor 3:** I think that it is an excellent course, in that it helps to bridge the gap between theory and clinical practice. Ever since this course has been introduced to medical students, from 1st year onwards, we have found an improved understanding of application of the basic skills for example, if the patient pitches up with an emergency and if it is trauma related or non-trauma related, but it is an emergency, students no longer faint on site. Students are no longer taken by surprise. Students who are attached to clinical departments whilst on intake are able to adapt and respond to emergency and they help together with other members of the team to stabilise patients, to resuscitate patients and they learning on site.

**Ward Tutor 4:** In terms of the content covered by the course, I have a basic overview of the course which is the ABC and basic life support. And in terms of the perception of the course, I think it is excellent basic programme to be taught to all people, let alone, medical students and it serves to give a practical approach to patient in any way having any problem and I am for the basic life support and the emergency care for the practitioner.

**Ward Tutor 5:** I am happy with the content that is covered in the Skills Lab. I think that there may be room for expanding the practical component on actual patients so I think the Skills Lab has achieved a lot, but there may be some there may be some deficiencies in the way students exam and communicate with patients in the ward. The difference is largely because we are trying to compare them to a 5th year group who already started having clinical contact from the 3rd year. When we are looking at the current 3rd year group in the new curriculum and even though they are integrated and they have had some clinical contact with actual patients from the first year, their clinical skills they have only started using them at the bedside in the 3rd year so that may be part of the reason it may be difficult to compare the 3rd years in the new curriculum and the 5th years in the old curriculum.

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**3. Do you believe that the Course has had an impact on the student's clinical ability on real patients?**

**Ward Tutor 1:** Certainly, it has and it is well demonstrated when they are with you where there are patients on whom they need to apply the skills that they have learned in the Skills laboratory. They so much easier and it has so much meaning to them and it makes teaching them so much easier

**Ward Tutor 2:** yes, judging from the 3rd year students, I have found that they are much more confident in approaching patients. They have been able to use equipment confidently and they know names of equipment and things like that. And they are able to handle emergency situations even though they are 3rd year. So I think it has a good impact on these students.

**Ward Tutor 3:** Yes. Like I said earlier, there is no doubt in my mind that if you take an Emergency Medicine course which is basic ambulance emergency skills or basic first contact emergency skills and if you teach them sequentially in terms of importance of the skills, and you translate that from the skills lab to the real situation, students have really benefitted and I have no doubt that the clinical skills of our students, our current students are enhanced by virtue of this course.

**Ward Tutor 4:** in terms of the clinical ability, I think the student has the ability because he has been taught it, he's been virtually indoctrinated with the ABC approach but I think he has a sense of fear dealing with a live patient versus a simulated setting. Because here the patient can respond to him, can in some way verbalise to the doctor and I think his fear is with a simulated patient he is in total control whereas the real live situation, he needs to interact with the family as well as the patient and I think he has a sense of fear. But once he overcomes the fear, I think he will do well in the real situation.

**Ward Tutor 5:** As I said earlier, it is very difficult to see if the course had an impact on the students' clinical ability. When I say this, I am comparing them to a student who would come to us in Paediatrics for the very first time, be it 4th or 5th year students. And like I said it would not be fair to compare them to 5th year students. At the moment it is very difficult to see an impact on their clinical ability. Well they are not involvement in the management and assessment of the critically ill patients. A lot of the emergency skills they use during the problem-based curriculum, we will only see the effect, once they start seeing patients in the emergency setting or the patients have just arrived in the hospital. We are teaching them currently on stable patients and how to illicit clinical signs and they do not join the intakes which will be expected of them in the final year, which our current 6th years are doing. In that year, it becomes really interesting to note, because we will be able to observe their hands-on skills in the emergency care assessment and even clinical assessment will be more fine tuned by next year.

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#### **4. What are your perceptions of the Curriculum 2001 (PBL) students ability to perform clinical skills on real patients?**

**Ward Tutor 1:** I have not had exposure to these students so I'm not sure how, ou know, I cannot speak for those students. My exposure has been mainly the old curriculum students. They are based at other hospital not where I teach.

**Ward Tutor 2:** I think when it comes to your ABCD approach, they are able to integrate it well in terms of answering questions but if you take them to the patient's bedside for example our emergency room 12, there are some of them who are able to use your equipment and use that approach clinically, but there are some students who like, I don't know if they don't have no clue on the topic that we are doing and cannot say, okay, forget the academic part of this and let me use my ABCD approach. So there are some of those students, but I say there are very few of those students. Most of them can say there may not be able to tell me the fifty causes of something, but if I show them a patient, they are able to start with the ABCD approach and use it on the patient.

**Ward Tutor 3:** I think you may have heard my comments before in academic meeting with Head of Departments. Our medical students are integrated into clinical content, right from year one, but the introduction to clinical content is gradual and progressive, my take on this question is that initially, our students appear a bit apprehensive in terms of applying skills that they have learnt in the laboratory to the real patient. initially the appear inhibited, but with time, students have shed those inhibitions and are now integrating themselves with other team members of the emergency team and basically students are now implementing the skills that they have learnt in the Skill Lab and they are now able to very boldly join other members of the team and by being part of the team they are assisting patients.

**Ward Tutor 4:** I teach 3rd year students in term of medical emergencies, and yes, they know the practical aspects but when we deal with the real patients they have a sense of fear and I think if that is overcome where they interacting with patients much earlier in the curriculum, I believe they would make excellent students. I think the programme of problem based, seems to work, excepts that it works in a simulated versus the live patient where he doesn't have interaction. he needs to be brought into the emergency care for practitioners where he can have a small component of dealing with a live patient. Because that patients is gonna hit him, move around and in terms of say, cervical injury he knows when a patient is not moving, he can deal with when that patient is thrashing around, how is he able to cope with it? I don't think he is able to cope with it.

**Ward Tutor 5:** Again, as I said, the issue of when we are talking about clinical skills, their ability to pick up clinical signs and examine the patient, the stable patient, is probably not that different from the 5th year in the old curriculum . Their emergency care skills, I cannot yet assess.

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**5. What are your perceptions of the 5th year students' ability to perform clinical skills on real patients?**

**Ward Tutor 1:** I think their skills are excellent. They all come well prepared. They have an insight to what is expected and what one is doing. I think I have had no problems with their ability to apply what they have learnt in the Emergency Course.

**Ward Tutor 2:** I think the traditional students, unless they had formal training in emergency medicine, like the ACLS courses and all, I know as for myself, had no clue what to do with a patient clinical. Even as interns, it's been quite difficult in an emergency, how to approach a patient and what are the first things to do, but it is only after I've done those courses, that I know what to do. So I think the traditional students are lacking behind when it comes to managing patients and emergency patients as well.

**Ward Tutor 3:** The old curriculum students have been spoonfed. They are guided through the wards, their hands are taken by the tutors and placed on patients chests, patients' abdomen to feel for a liver to basically palpate, percuss. And clinical tutors in the past, have had to spoonfeed these students in a clinical situation. Now the difference between the old students and the new students is that the old students were spoonfed and the old students gradually got inducted into the clinical setup, by virtue of having a mentor. With the proble-based curriculum having been introduced and with a depth of facilitators and clinical tutors and the scarcity of facilitators and clinical tutors in clinical situations, we are finding now, that our PBL students do not need to be taken by the hand and taught how to percuss and how to palpate and how to look for clinical signs that are already there. These skills have already been taught to them in the Skills Lab. So that for me is the biggest difference and biggest advantage of Curriculum 2001.

**Ward Tutor 4:** I think the traditional students have an excellent outlook of a real situation, but I don't think they have the skills for the emergency situation. They can deal with non-emergency situations beautiful but in emergency situations, they lack that competency and the confidence to deal with it.

**Ward Tutor 5:** Again, the only clinical skills that I have observed the 5th year students performing on the patients, is examining the patient, and eliciting clinical signs and I think it is no different from the current 3rd year students.

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**6. Are you able to differentiate between the PBL students and the Traditional students based on their ability to perform clinical skills on real patients?**

**Ward Tutor 1:** N/A

**Ward Tutor 2:** Yes, it's quite easy to differentiate between them because you can see the ease and the confidence in which the PBL students approach the patients and manage them and the traditional students, not very confident and they don't have an approach to the patient. So they pull out things from the head and try to manage the patient but no real approach, so you can differentiate between them.

**Ward Tutor 3:** Oh, yes. The students coming from the PBL do not need to be inducted, except for as I said their inhibitions in touching real patients. Once they have touched real patients, once they have got used to understanding that this is a real patient versus a simulated patient, they get on with it. Whereas, the old curriculum students have traditionally been taken in and guided by their clinical tutors on how to do the clinical skill in the real type situation. For me that is the biggest difference and one does not need to look beyond, you don't have to look too far to decide which is the new curriculum student versus an old curriculum student.

**Ward Tutor 4:** I think I find it easier to differentiate them in talking to them and asking them how they would manage medical emergencies. The traditional students do not think ABC, the

PBL students think ABCD and they know exactly how to deal with it. But in terms of the clinical and live realities, I think both of them lack the confidence because they not exposed to it as much.

**Ward Tutor 5:** No, I don't think so.

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**7. Elaborate on your response to the above question and also highlight some examples of how they are different (if they are different)**

**Ward Tutor 1:** N/A

**Ward Tutor 2:** It's basically the traditional students don't have the approach to patients and the PBL students they have an approach. Also, the traditional students have difficulty with the equipment, with trying to identify equipment and even use it. The PBL students, they know equipments, the name, what it is used for and how to use it.

**Ward Tutor 3:** As I said earlier, old curriculum students have been taken into the clinical context from 3rd year onwards. They are attached to big clinical disciplines such as Family Medicine, Internal Medicine, O&G, Paediatrics, Psychiatry and Surgery. Initially they are inducted to clinical teaching by way of tutorials. These tutorials take place at the bedside where the clinical tutor demonstrates physical signs that are present on the patient. I'll give a classical example, for example if the patient has Dysomegly in the abdomen, the tutor would physically show the students from step 1 to step X or Y exactly how to palpate for the liver, to palpate for the spleen and for the kidneys and to elicit shifting dullness in a case where the patient who has ascites. Now that is in the old curriculum. With the new curriculum, we find the transition from the Skills Laboratory to clinical teaching is much smoother. In that the clinical tutor spends less time at the bedside illustrating to students on how to palpate the liver. The clinical tutor would go straight into palpating the liver, demonstrating the sign without going through it step by step which takes time. And which is time consuming, not only for the student but for the tutor who happens to be a service provider in the ward and whose time happens to be of paramount importance. For me, that is one of the biggest savings that PBL curriculum has had on clinical teaching, where less time is expected from the clinical tutor in spending with the students in illustrating these signs. That's the first thing, the second thing is the PBL curriculum versus the traditional curriculum. The Traditional curriculum students have been spoonfed by tutors in that they have taken very little responsibility except in final year. The PBL curriculum students take responsibility for patients in a team manner from year one to year five.

**Ward Tutor 4:** In terms of the PBL students like I've said throughout the interview, they have the knowledge, they can describe it in detail on how to do and assess a patient in an emergency situation, I'm sure they can do it beautifully on a simulated patient but in terms of a real situation, they have a sense of fear, maybe if I do the wrong thing and this patient dies or maybe if I don't act as quick as I should act. They have that knowledge but they just lack that confidence but in terms of the traditional students, they lack the knowledge, and the confidence and no kind of conditioning in how to deal with an emergency situation. He is very haphazard. He'll deal with a patient, but in a haphazard way. He has no functional or operational way in how to save the patient.

**Ward Tutor 5:** N/A

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**8. What is your view on how medical students should be taught clinical skills? (When - time during the programme) (Where? - Wards/ Lab) (How? - on real patients/ simulated patients/ models)**

**Ward Tutor 1:** in terms of when they should be taught this, I think that it should be after they have covered the basic subjects in medicine like Anatomy, Physiology and Pathology because that gives them an insight into what they going to do because you know they have a knowledge of the Anatomy of the airway of the circulatory system. Another thing is the system that they are going to use in the clinical scenario so I think it should be that they shouldn't unless they had exposure to subjects especially Anatomy and Physiology, I don't think it would be of great value to them before they are exposed to these subjects. Where they should be taught, I think it should be taught in the Lab situation and I think we've got an excellent Laboratory here, and I think they learn to hone their skills and to learn how it is that one introduces intravenous lines and intrachael tubes, central venous lines. They have an idea, they have an idea of the Anatomy and what they aiming for, so I think that 'yes' it should start off as a Laboratory based course which later they can carry through in the ward situation. So they got the basic skills and knowledge about what these procedures entail and they can now apply it, under supervision, of course, in the clinical situation which is quite different now. And I think it should start with models first and then maybe with simulated patients and then finally on real patients.

**Ward Tutor 2:** I think the clinical skills should be taught, integrated with each theme that you are doing. I feel clinical skills should start in the Lab and then progress to the wards. So it should start on simulated patients and models and then progress to real patients, because we have to take the patients into consideration. They come here for a service and unless the students know what to do, I don't think they should be allowed to touch the real patients so that's how I feel it should be done.

**Ward Tutor 3:** Firstly, with regards to the ECP Course I agree that that course should be done in the first year as it is at an introductory level firstly, secondly, it is very similar to a bystander in the street who is expected to have more than just a basic knowledge of First Aid. Secondly, from 1st year to final year, my feeling is that clinical skills should first be taught on the basis of themes that the students go through, in a progressive fashion, so their learning is incremental and spiral based. So as they move from Year one to year five, their learning content is increased both in depth and in breadth, and their clinical skills have also improved in parallel to the depth and breadth of the content of the curriculum. So for me that's the first part. Where should it be taught, no doubt, I think it should be first taught in the artificial setting, artificial setting being simulated patients, being mannequins, and the one thing is missing in this medical school or it may be because of resource constraints, we have not moved quickly, from the mannequin stage to the simulated patients. Thirdly, once the students have practiced on simulated patients, then we can move them smoothly into the clinical situation.

**Ward Tutor 4:** In terms of when, I think it should start as early as possible, I come from the traditional and I didn't even know First Aid, so I lacked that confidence to stop and help somebody who is even falled, because I didn't know what to do. But I think that the PBL student has the ability to stop and help somebody because he's got that knowledge which the traditional students don't get. And in terms of where, I think both. All of us need to develop a skill and a skills that we can develop without wondering if we are further going to injure a patient, should be done on a simulated. An in terms of a simulated patient, all of us know we gain confidence on a simulated patient, but that should be integrated with the live, not just when the come into the wards. I think it should be from the first year because most of them when the come into the 3rd year when they have exposure to real patients, don't know how to go through this transition and my feeling is it should be interated with live and simulated patients, but start with the simulated patients because that's where you get the confidence to deal with the real patients.

**Ward Tutor 5:** I think that clinical skills should be taught fairly close to the time when students are examining real patients and I think the problem is, they often think about it, if they do purely Lab-based clinical skills in one year and go and examine patients the following year. The Lab-

based actually should be treated as a purely theoretical and mechanical exercise and your first experience of a patient is always another experience. So, I feel that they should be fairly close to each other in the programme. And there should be an opportunity while they are doing their tutorials, to come back into the Lab and fine tune their clinical skills. Especially if they feel they are experiencing a bit of anxiety or feel they lacking confidence. In terms of dealing with actual patients, I'm not sure how well simulated patients will work. It will help with regards to problems dealing with anxiety and communication. It may be logistically difficult in terms of running such an exercise, finding adequate patient simulation models and time to do that. But, I think patient simulation might work very well from the point of view of history taking and communication skills.

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## **9. Comments or suggestions**

**Ward Tutor 1:** I think its an excellent course. It introduces them to aspects of medicine that they can then apply in the clinical situation. It prepares them, it gives them an insight, which I think is extremely important, an insight into why certain things will be required of them later. And what the paces is for things that they will see being done in the ward in the clinical situation, so that they don't come there totally green, totally ignorant about why we doing certain things and the manner in which we do things. So in my mind, this is an absolutely important aspect of their training. It is well that they start off in that situation before they arrive in the ward situation.

**Ward Tutor 2:** I feel it's really important. The Emergency Care Course has been noticed to be important in the MBChB curriculum. I know when it was my turn and I was doing MBChB, I had no, beside some basic life support in first year, I had no clue how to manage a patient when it comes to emergencies. i had no clue on the equipment and when to use, how to use it. So, as an intern, and a community service doctor, it's quite scary to go out there and not know and so I feel it is really important and I am happy to see that it has been integrated into the curriculum.

**Ward Tutor 3:** The first thing is from a family physician's point of view, I think the Emergency Care Course has had a beneficial effect on the development of students, whether they be old or new curriculum students. When you compare my development as a medical practitioner, having qualified from the same medical school, where we did not have these courses, we were in the dark in terms of how to approach a trauma patient out in the street. Now with the development of this course, I have no doubt the every student is aware of the ethical obligations, of a trainee, or a trained medical person in that field how to respond to an emergency. Secondly, I have no doubt that this course prepares the student, both in lenght and bredth, for future development and it helps the student understand how deep and wide the curriculum is in medicine in that not everything can be taught to the student, but basic skills can and if basic skills are taught to a student from an early age, the student has to develop himself, through sheer enthusiasm, and taking the initiative. And once the student takes the initiative, the student is able to move from practical understanding, from practical understanding to practical implementation and being a member of a team, the student learns whilst others are watching and for me that is the biggest benefit of Curriculum 2001 and the Emergency Care Course.

**Ward Tutor 4:** in terms of the PBL and the Emergency Care for practitioners, I think it's excellent when I talk to students, they know airway, they know how to maintain an airway, they know how to position a patient to maintain an airway, they know how to take care of an airway in a trauma patient. It's excellent, the breathing, they know how to assess a patient without the tool which is a stethoscope and they know how exactly how to do that, even the circulation, they don't need a stethoscope. And the clinical teaching, in terms of the emergency care, I think it is excellent. They just need to develop the confidence in a live patient and I think more exposure to a live situation, the greater the confidence. i don't think the emergency care should be taken off the MBChB curriculum.

**Ward Tutor 5:** I think next year will be crucial in seeing what the effects of the clinical skills component of the new curriculum has had with regards to Paediatrics. And largely because they would be joining the ward rounds, looking after patients on their own, under supervision as well and that's where we will see an effect. At present, everything is done mechanically, so to speak, but again, I'm pleased that they are functioning almost equivalent to a 5th year level. I think the important thing at this stage is not to see whether they are better in any way than the students in the 5th years in the old curriculum. But I think they have achieved a similar status in terms of being prepared for their final year.