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Symbolic access: medical students' awareness of institutional culture and its influence on learning

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Symbolic Access: Medical students' awareness of institutional culture and its influence on learning.

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0602100T

A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Health Sciences Education.

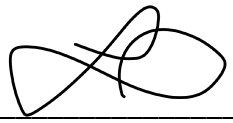
Supervisor

Shirra Moch

Dar Es Salaam, 2023

Declaration

I, Dina-Ruth Lulua, declare that this research report is my own, unaided work. It is being submitted for the degree of Master of Health Science Education at the University of Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other university.



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Signature of Candidate

15th day of June 2023

Dedication

To every writer,

"Writing is hard work. A clear sentence is no accident. Very few sentences come out right the first time. Remember this in your moments of despair. If you find that writing is hard, it's because it *is* hard."

William Zinsser

'On Writing Well' pg. 9

Abstract

Background: The discussion of access in medical education commonly has its focus on physical and epistemological access, leaving a qualitative gap regarding sociocultural factors which influence access in this context. This study introduces and defines symbolic access, a concept with a specific lens on sociocultural inclusion, and the impact it has on student learning within a South African medical school.

Methods: : A phenomenographic design was used to explore conceptions of symbolic access and its impact on learning. Fifteen one-on-one exploratory interviews were conducted with final year medical students, a sample exposed to the entire 6-year medical programme. Interviews were analysed using Sjöström and Dahlgren's seven-step phenomenography model.

Results: Four categories of description were induced, describing students' understanding of symbolic access, these were rejection, disregard, alienation and actualization. Five dimensions of variation were discovered, and they expressed the different ways the conceptions were experienced, these dimensions were: interactions with educators, peer relationships, educational environment, race and hierarchy. Categories of description and dimensions of variation formed the Outcome Space, a visual representation of the student experience of symbolic access. The outcome space had a double narrative related to symbolic access; exclusion (major) and actualization (minor). Medical student's chief experience within the medical community was exclusion, however experiences of peer-relationships, clinical skills lessons and participation within the clinical setting facilitated feelings of community inclusion and impacted learning.

Conclusion: Despite exclusionary experiences, students articulated an awareness of attaining symbolic access during the clinical years, additionally meaningful and transformative learning experiences were described during these same years. The study found that attainment of symbolic access and students' perceptions of valuable learning are linked. Health profession educationalists should design undergraduate curricula with early clinical immersion at the fore and explore symbolic concepts pertaining to access, as they are connected to meaningful learning experiences for the medical student.

Acknowledgements

'…It's useless to rise early and go to bed late and work your worried fingers to the bone. Don't you know He enjoys giving rest to His beloved?" Thank you, Holy Spirit.

Smalley, my deepest love, and gratitude to you always. I am truly blessed to share everything with you…especially the completion of this work across 10 African countries!

Mommy, Agasi, Mungufeni, Edoru and Daddy, thank you for the prayers and encouragement.

Friends, words are not enough! Thank you.

Lynne 'Slo' Slonimsky you brought out the problem I wanted to solve during our talk that night. Bless you.

Hilary, thank you for always asking me to explain and define what was going on in my head, for every correction, and most especially for being you.

Shirra, you pushed me to look for meaning in every sentence, which helped me to cross a BIG threshold, thank you for helping to birth this baby.

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List of Abbreviations and Acronyms

CoD	Categories of Description
CoP	Community of Practice
DoV	Dimensions of Variation
GEMP	Graduate Entry Medical Programme
HREC	Human Research Ethics Committee
LPP	Legitimate Peripheral Participant
MBBCh	Bachelor of Medicine and Bachelor of Surgery
MS	Microsoft
SC	Socioconstructivism
SoC	Students of Colour
Wits	University of the Witwatersrand

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Chapter One: Introduction

Over the past fifty years there has been a global widening of access in higher education.[1] This expansion included policy creation to close access gaps, targeted funding of certain population groups, increases in accredited distance learning programmes and plans to establish an estimated 150 million universities worldwide by the year 2025.[1,2] These initiatives focused primarily on physical access to higher education with limited attention to access through the symbolic lens. The symbolic lens constitutes an institution's culture, traditions and implicit codes which shape it as a community.[3] This symbolic space is bound by intangible yet present borders that define some people and groups as included while excluding others.[4] The discussion of access in higher education, therefore, goes beyond formal admission into physical spaces or the availability of knowledge, to include the symbolic entry into a group or community.

In literature the term access has been theorised as 'all possible means by which a person or persons is able to benefit from certain things'.[5] This study conceptualises a definition of access from the Ribot et al[5] and Binderkrantz et al[6] , and proposes the definition to be; *when an outsider/s cross a threshold controlled by relevant gatekeepers, and through this crossing the outsider/s benefits from things within the community—including material objects, knowledge, persons and institutions.*[5,6] In teaching and learning Cele and Brandt[8] categorise access into two parts, namely physical, and epistemological access. Physical access is access to the space and resources that higher education institutions provide, it aims to ensure all those entering higher education are qualified to enter. Epistemological access refers to access to academic literacies (curriculum content and knowledge) which are needed to succeed in higher education (Figure 1.1).[8]

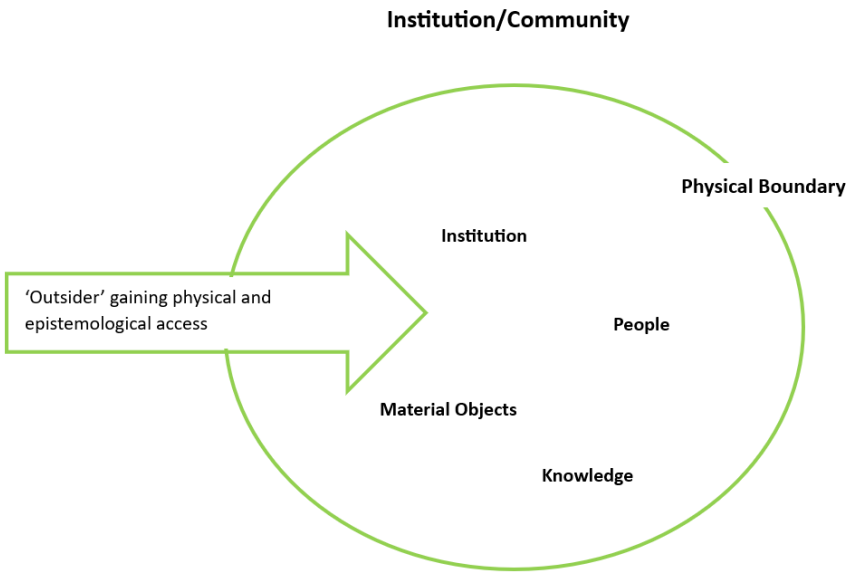

Figure 1.1: Physical and Epistemological Access

These educational categories, however, do not account for access to the symbolic aspects of teaching and learning, leaving a notable gap for the introduction of symbolic access in teaching and learning.

Symbolic Access in Teaching and Learning

Distinctions between people, groups and things create the boundaries that separate us physically and symbolically. Symbolic boundaries house an institution's culture and like physical boundaries, symbolic boundaries require access to obtain said culture, which includes the institution's traditions, behaviours, discourses and values.[4,9-11] Symbolic access is an emerging concept; hence its definition is developing, currently its definition is conceptualised from multiple sources, for the purpose of this report, symbolic access will be defined as, *when an outsider/s, are given opportunity to gain community culture and identity by gatekeepers within the community* (Figure 1.2).[4,5,9] In teaching and learning gaining symbolic access is an intangible event, however it can be recognised by the way the individual who has obtained it changes their expression both within and outside the community. In higher education, symbolic access can be

facilitated through relationship development and socialisation of 'outsiders' (students) by established community members, into the cultural systems of the institution.[12,13]

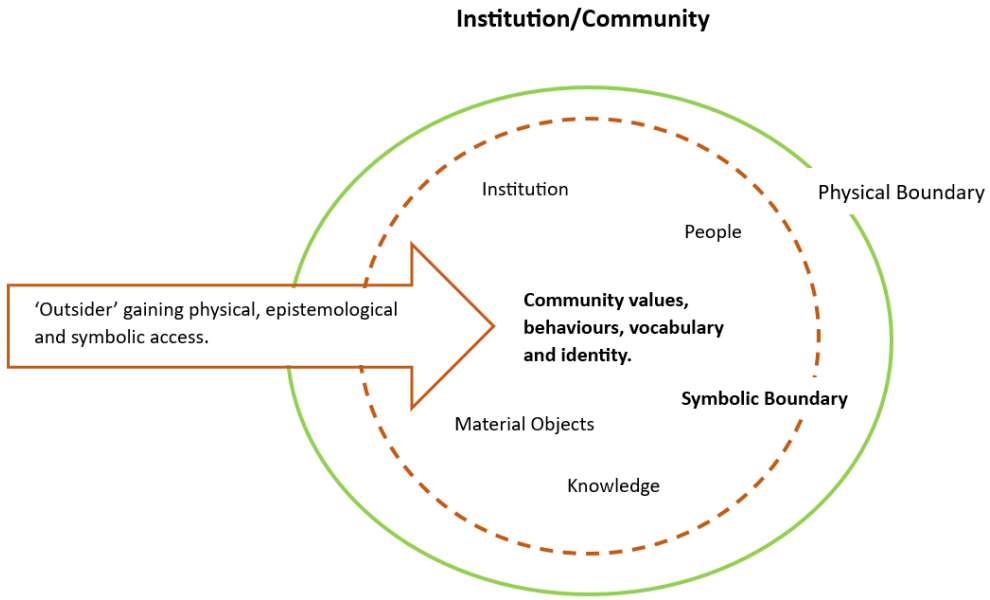

Figure 1.2 Symbolic Access

The medical education community has a deep-rooted culture and students admitted into medicine come eager to learn what is necessary to be part of the community, fostering hopes of developing their identity as a junior doctor. Over the years the medical education community has been encouraged to not only supply students with programme admission and course-based content; but to be cognisant of the role relationship development and community socialisation play for the medical student.[14] Through these two social events established community members enable symbolic access for these students.

Situated Learning Theory and Symbolic Access

Educationalists Lave and Wenger[12] theorize that academic relationships and socialisation are integral for student learning. In their theory of Situated Learning, they assert that learning is a social process, shaped by the development of relationships and socialisation between

newcomers (students) and old timers (educators/established community members) in a Community of Practice (CoP). They conclude that learning has occurred when a newcomer changes their participation within the community.[12,13] Both symbolic access and learning require relationship development and socialisation to be realised. The exploration of symbolic access in higher education, therefore, is also an exploration of factors that influence student learning in higher education.

Chapter Two: Literature Review

Considerable educational research is driven by the question: "What factors influence student learning in higher education?"[15-18] Commonly documented influences include student learning styles, teaching strategies, demographic background and the learning environment.[19-23] While these factors have been explored extensively there is need to focus more deeply on sociocultural factors as they relate to student learning.[24]

Sociocultural factors include the relationships, culture, traditions and values of a community; Bowles et al[25] explain that in higher education these factors fall under the umbrella of institutional culture. How students gain access to institutional culture or their awareness of it has not been described or fully investigated in the literature within the South African context. Leibowitz et al[26] explain that in order for learning to successfully occur continual consideration and reflection, by educators, needs to be placed on the social, cultural, and community factors that promote or constrain learning. An inquiry into how students recognize, and access institutional culture is warranted.

Raso et al[27] inform us that educator-student socialization, relationship development and student enculturation occurs in the hidden curriculum. The study of symbolic access, therefore, is situated in the hidden curriculum. The hidden curriculum has emerged as an influential concept in medical education, as researchers realized the impact this informal teaching and learning has on the student learning experience. Through this socially 'taught' covert curriculum, community values, norms, and attitudes are largely learnt, and these unintended socio-relational lessons may

facilitate symbolic access for the student.[28-32] Over the last two decades medical education has produced growing literature on the hidden curriculum, however Bandini et al[31] highlight that there has been a lack of specificity in this research. Lawrence et al[33] inform us that there are multiple ways the hidden curriculum presents itself, and that it is not just a blanketed singular curriculum. Researchers are encouraged to make explicit the details and nuances of the hidden curriculum, as being detailed will allow policymakers and curriculum developers to better identify literature related to their own needs and initiatives. Two thirds of current literature on the hidden curriculum is limited to North America, as a result the production of more contextualised studies from areas such as Africa has been strongly encouraged to adequately represent hidden curricula in their medical school contexts.[33] Exploring symbolic access in medical education brings to the fore a nuance of the hidden curriculum and studying this nuance within a South African context lends itself to filing literature gaps.

South Africa, Symbolic Access, and Higher Education

The South African higher education setting is uniquely framed for the exploration of symbolic access. South Africa has a devastating socio-political history, which created a distinctly separatist higher education setting and culture. Under the Apartheid regime, South Africa had five separate legislative and geographic regions resulting in the establishment of 36 higher education institutions controlled by eight different government departments.[34,35] A distinguishing feature of the Apartheid higher education system was the unequal access to academic, structural, cultural and social resources in the education of different racial groups.[36] As a result of these disparities one of the main priorities of the post-1994 democratically elected government was to redress the inequalities within the higher education sector, by adopting policies that would widen access to higher education for all South Africans.[37] This resolve was captured in the White Paper on Higher Education 1997, that promised a "transformed, democratic, non-racial and non-sexist system of higher education which promoted equity of access and fair chances of success for those seeking to realise their potential through higher education."[36]

Significant achievements regarding this access policy were realized, including an increase in the proportion of black and female students in public higher education, changes in the academic profiles of institutions, and the establishment of a national funding framework. However, the higher education mandate of the new 1994 government focused primarily on physical and epistemological access in higher education, neglecting to envision steps which would create opportunity for symbolic access in tertiary institutions.[36-38] Reddy[39] explains that transformation in South African higher education focused on issues of student intake and throughput, as well as the over-representation of white faculty at the expense of issues such as institutional culture and the implications thereof. The journey of how students would adopt institutional culture and the process were not deeply considered. The movement in South Africa towards granting entry into higher education did not necessarily equate to student [learning] success, as this physical provision of access did not address inclusion beyond university admission.[40,41]

Some twenty years into democracy, the South African government was directly confronted with this symbolic oversight in what Jansen et[42] describe as, "…the most intense and violent student protests in a century of higher education", the #RhodesMustFall and #FeesMustFall movements. Two factors attributed to the 2015-2016 country-wide student protests: the alienating cultures of historically white universities, labelled #RhodesMustFall and the discriminatory cost of higher education known as #FeesMustFall movement. The #RhodesMustFall movement specifically brought to light the ills of cultural exclusion experienced post 1994 by the black scholar and black academic.[43]

This narrative of cultural exclusion presented itself at University of the Witwatersrand (Wits) in 2017, when final year medical students displayed a banner during their class photo stating 'Wits Med School is Racist' (Figure 2.1). This declaration was vehemently rejected and denied by the medical community in the university.[44] A more insightful response, according to Mahood[45] would have been for the academics in the programme to address the students' perceptions of exclusion, and further to investigate what aspects of the curriculum, programme and institution created these feelings and perceptions.[45]



Figure 2.1: Final Year Medical Students Class Photo 2017 [44]

Symbolic access to institutional culture appears to be a potent stumbling block in the South African higher education space and more specifically in medical education. If left unexplored, students will continue to struggle navigating the academic space; and will be forced to exist on the periphery of the medical community. It is increasingly important for educators in higher education to shape a more inclusive institutional culture . This would empower educators to thoughtfully engage students and take responsibility for the role they play in symbolic access to learning.[46]

Rationale for Research

Wits medical students are exposed to an established institutional culture during a six year long medical programme. In 2017 these students publicly expressed their experience of alienation and discrimination in relation to institutional culture. The Wits medical students' experience of access to institutional culture and the impact it has on learning has not been formally researched or reported. Literature asserts that for successful learning to occur educators and education bodies need to continually consider and reflect on social, cultural, and community factors that promote or constrain learning. An inquiry into how Wits medical students recognize, and access institutional culture and its impact on learning is warranted in this context.

Research Question

How does symbolic access to institutional culture affect learning for the medical student?

Aim of Study

To explore final year medical students' awareness of symbolic access in Wits medical school and the impact it has on their learning.

Objectives of Study

- Explore final year medical students' awareness of symbolic access.
- Explore final year medical students' perceptions of the influence symbolic access has on their learning.

Chapter Three: Methodology and Methods

This chapter describes how the researcher systematically planned and conducted the study from philosophical thinking and research design to data gathering and analysis, ensuring trustworthiness and ethical considerations of the research. The methodology and methods chapter will help to ensure valid and reliable results, that address the study aims and objectives.[47-50.]

Theoretical Framework

This study was rooted in an interpretivist paradigm. Research with this world view seeks to interpret phenomena according to the subjective frame of those who are in the world.[51] Further the study drew on Socioconstructivism (SC) as a theoretical framework. SC falls within the interpretivist spectrum and is a combination of Social Learning and Constructivist theories.[52,53] SC Theory proposes the collaboration of Social Learning Theory with works by Vygotsky, Bandura, and Akers and Constructivist Learning Theory as stated by Bruner. Socioconstructivism asserts that knowledge construction (learning) is based on an individuals' previous knowledge and experiences, coupled with their interaction with the context and culture of the environment.[54-56] This framework supported the study and its methods to discover how individuals understood and experienced symbolic access and further how they made sense of these experiences in relation to their learning.

Methodology

When choosing a methodology, the most important question a researcher needs to ask is: what type of knowledge is required to best answer the research question? [55] The research question of this report sought to acquire experiential knowledge of a phenomenon, within an educational context, therefore phenomenography was the methodology chosen. Phenomenography is a commonly used qualitative methodology within the social and health sciences. It was developed in response to educational research needs at Göteborgs University in Sweden.[57] As a research design, phenomenography aims to answer specific questions about thinking and learning, and it helps to describe the variation of ways that people experience the same phenomenon. In medical

education, phenomenography is used to encourage the use of varied teaching and learning interventions according to the unique experiences of the participants. Further it has allowed an understanding of varied student learning experiences within the discipline.[58-61]

Study Setting

The study setting is the physical or social environment in which the research is conducted based on the study aims. For this study, the researcher aimed to investigate symbolic access in medical education and establish its influence on learning, therefore a unit for undergraduate medical education at a research-intensive university in Johannesburg, South Africa was chosen. When selecting a study setting it is important that it provides the researcher access to study participants who can give insight and relevant information on the topic being studied.[62,63] The selected unit coordinates the undergraduate medical degree in the School of Clinical Medicine in the Faculty of Health Sciences in the university, which provided appropriate access to study participants.

In qualitative research, it is important for the researcher to elaborate on the social context of the study setting as it adds historical and current insight to the investigation.[63] The medical school, where this study was conducted, is a historically White Anglo-Saxon influenced university, founded in 1916 by a homogenous all male, all White committee.[64] South African medical institutions are deeply rooted in cultures of educational exclusion based on race, gender, religion and class. This segregation translated to how students were taught (and by who), the hospitals they could attend, patients they had access to as well as social interactions within the institution.[65] Over the years there has been significant diversification of the institution and medical school community; the institution now consists of a community which is much more representative of the South African population at large.

At this university, the medical degree (MBBCh) is 6 years long. There are two entry points into the degree: as a secondary school leaver into the first year of the programme or as a graduate into the third year as part of a Graduate Entry Medical Programme (GEMP). The Faculty of Health Sciences is adjacent to a quaternary level teaching hospital, and five kilometres from the site of the central University administration and most other teaching facilities. Students who join the

degree programme from high school spend the first year on this university site, remote from the health sciences campus. From second year onwards, these same students move to the health science campus. First to fourth year students spend ninety percent of their almanac in didactic teaching, while fifth- and sixth-year students spend ninety five percent of their academic calendar in the clinical setting as they rotate between three academic hospitals for teaching in Johannesburg and Soweto.

Study Population

A study population is defined as the targeted study group of interest to the researcher, who meet the study criteria, which serves as the larger group from which a study sample is selected.[50] The study population of this project was the 2020 final year medical students' (n=321) outlined in Table 3.1.

Study Sample Selection

Participant selection for phenomenographic studies requires the researchers to make strategic efforts to maximise diversity of participants selected, this ensures inclusive representation of participant experiences. Purposeful sampling is typically used as a selection method in phenomenographic studies, and when appropriately done, the selected sample allows researchers to learn about the entire study population.[66,67] To adequately explore medical students' awareness of symbolic access and its impact on their learning in this population, the researcher had to select participants who represented the diversity of the medical student demographic in this population. Participants were to be chosen based on the following pre-selection criteria, including race, gender, age, local vs international students, graduates and school leavers, top, middle and lower academically scoring students. These criteria would enhance representation of the study population being studied.

Sample Size and Data Saturation

In qualitative research sample sizes are usually small, with an intention of obtaining a rich in-depth description of the phenomenon of interest. The sample size of this study was 15 participants, phenomenographic studies typically suggest a sample of 10-15 participants as

sufficient to capture variation and reach saturation, at which point no new information emerges from the data. There is no recommended upper limit currently, however sampling should ensure that the resulting amount of data remains manageable.[66,68]

In qualitative research there are several debates concerning sample size in relation to data saturation. Data saturation is an important concept in qualitative circles as its deemed the compass that guides the researcher about the 'right' sample size for their project.[69,70] Although commonly used data saturation is frequently contested, multiple researchers argue that saturation is a poorly defined concept; often expressing there is no agreed method of establishing saturation.[71] Over the years the idea of sampling until data saturation is reached has been raised in several health-related disciplines. In health professions education, qualitative research scholars add to the debate by stating that, there is no consistent explanation as to how saturation has been achieved amidst the claim that saturation is reached.[71] In light of these differences, up until today, researchers seek to truly define saturation; in order to give a clear outline of when saturation is reached and provide some guidance regarding how many interviews, or focus groups are sufficient to validate the sample size.[71,72]

The chosen sample size for this project falls within the recommendation for qualitative and phenomenographic studies. The size also aligns to current medical education debates, which recognizes that saturation and sample size is still an ongoing discussion within qualitative research. Further the decision to stop interviewing after 15 interviews was based on logistics, advice from the supervisor, informed by literature, and the limitations of a research report dictated the end point.

Convenience Sampling

This study was conducted in 2020, and due to the COVID-19 pandemic, academic disruption and the abrupt university closure coupled with a short time frame to invite and interview participants before graduation, convenience sampling, instead of purposeful sampling, was conducted. Convenience sampling is the most common qualitative sampling method used.[67] Participants are

selected based on their availability in location, time, access, and willingness. It is a fast and a more convenient way to achieve the sample size required for a study. Following an invitation email sent to the entire class, nineteen final year students showed interest in being participants, the first 15 participants who were readily available were interviewed and became the realised sample.

Realised Sample

The realised sample, depicted in Table 3.1, had an acceptable degree of diversity with regards to participants' race, age, academic performance, gender, entry point into medicine and country of origin. This diversity was sufficient in order to provide insight into the study population.

	Realized Sample (n=15)		Study Population (n=321)
Race	African	N=8 (53%)	N=122 (38%)
	Asian	N/A	N=4 (1.2%)
	Coloured	N=1 (6.7%)	N=15 (4.7%)
	Indian	N=1 (6.7%)	N=69 (21.5%)
	White	N=5 (33.3%)	N=111 (34.6%)
Age Range	20-22 years	N/A	N=13 (4.1%)
	23-24 years	N=10 (66.7%)	N=201 (62.6%)
	25-26 years	N=2 (13.3%)	N=51 (15.9%)
	27-28 years	N=2 (13.3%)	N=46 (14.3%)
	>30 years	N=1 (6.7%)	N=10 (3.1%)
Academic Performance	Top Performing	N=4 (26.7%)	N=53 (16.5%)
	Middle Performing	N=9 (60%)	N=156 (48.6%)
	Lower Performing	N=2 (13.3%)	N=112 (34.9%)
Gender	Female	N=9 (60%)	N=179 (60.7%)
	Male	N=6 (40%)	N=126 (39.3%)
Entry to Medicine	School Leaver	N=12 (80%)	N=204 (63.6%)
	Graduate	N=3 (20%)	N=117 (36.4%)
Student Country of Origin	Local (South African)	N=12 (80%)	N=309 (96.3%)
	International	N=3 (20%)	N=12 (3.7%)

Table 3.1: Study Population and Realised Sample Demographics

Positionality and Bracketing of the Researcher

As the primary researcher I recognize and acknowledge my fixed and subjective positionality that may influence this research study.[73] I am a 35-year-old, African, female of Ugandan-South African heritage. I am a graduate of the MBBCh programme under investigation (2011) and have lived through the process of being a medical student within the institution. I have my own 6-year lived experience of institutional culture within the medical school as a young Black female student. As a medical officer, I was recruited into the medical education space to teach in this institution because of my race, gender, alumni status and millennial relatability. I taught clinical skills to the study participants during their 3rd and 4th medical years (2017 and 2018) and over the two years have developed rapport with the students and class as a whole. Until recently I coordinated the third and fourth medical years at the medical school, and therefore have a past and present insider stance. I draw on racial, social, educational, symbolic, theological, scientific and creativity theories to make sense of the world and am constantly conscious of my race, gender, and faith as I navigate every day.

I recognize that each aspect described influenced this research process i.e., my identity, lived experience of the university as a student and educator, engagement with the participants, theoretical beliefs, and perspective through which I viewed the research process as a novice researcher.[73,74] Deeper, I acknowledge that my positionality shapes my work and influences my interpretation, understanding, and belief in the truthfulness and validity of the participant experiences.

Data Collection

In qualitative study designs, value is placed on the depth of data collected, as opposed to the breadth; through various approaches such as in-depth interviews, focus groups or participant observations, the researcher can collect large amounts of data from a small sample.[75] In this study the researcher conducted individual in-depth interviews as per phenomenographic recommendation.[76,77] In-depth interviews are a conversational approach which seek detailed information from a small number of participants, over a significant amount of time. This format

helped to shed light on participants' thoughts, experiences, feelings and understanding of symbolic access. Facilitating the researcher to collect information regarding the phenomenon and to address the research question.[78]

Method of Data Analysis

The main aim of phenomenographic data analysis is to produce an outcome space, this space presents the qualitatively different ways participants understood the phenomenon and shows which experiences facilitated these understandings.[76] The first steps of phenomenographic analysis are similar to those of a thematic inductive analysis, the raw data are analysed, using a constant comparative method, and codes or variations are determined. After initial coding, a comparison of codes' similarities and differences is done, and the end result is the emergence of specific Categories of Descriptions (CoD) and Dimensions of Variation (DoV).[79,80] The CoD's demonstrate different ways the phenomenon is understood and the (DoV) show how the categories of descriptions are experienced and relate to each other (Figure 3.1) In phenomenography emphasis is placed on searching for the collective meaning rather than describing each individual's experience, hence CoD's are created.[76] Lastly all categories and variations are integrated into the outcome space.[80]

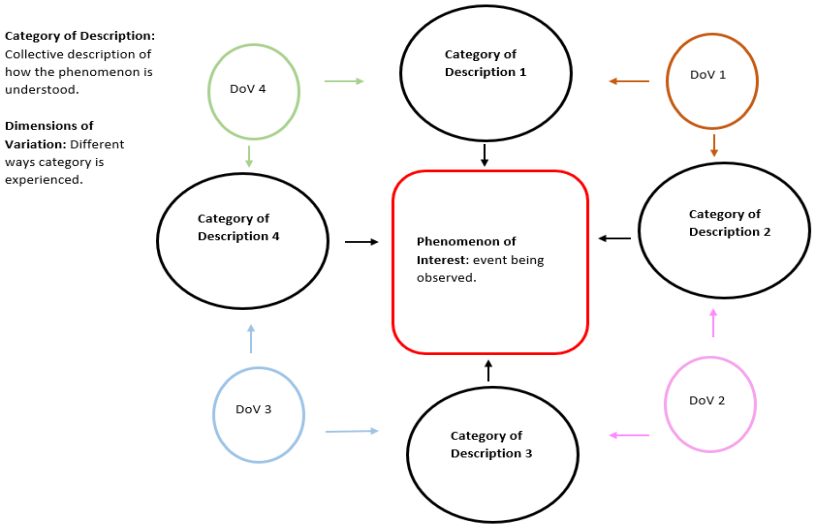

Figure 3.1: Relationship between Categories of description and Dimensions of variation.

Data Collection: Tool

In qualitative studies the main data collection tool is the researcher, and the questions they formulate.[81] For this study, the researcher created two open-ended questions with the guidance of her supervisors and a postgraduate assessor panel (Annexure H). Open-ended questions were created as they helped the researcher learn more about the topic, without attributing any bias or preconceived notions, leading to a discovery-oriented research approach.[81] Qualitative research questions are often semi-structured or open-ended and thus can be 'unique' to the study.[83]

Two prompt questions were also included, again with the guidance of supervisors. These prompt questions helped to solicit further detail and depth from participants; allowing the researcher to peel back information one layer at a time.[824]All questions were assessed and revised prior to data collection, and when designing the questions, the researcher referred to the research question, aims and objectives to make sure the questions would satisfy the study.

Data Collection: Process

Pre-Interview

After receiving ethical clearance, the researcher sent an email to the administrator of the 6th year medical programme, requesting an invitation email be sent to the entire 2020 final year student body inviting them to participate in the study. This email was sent directly to individual student's email accounts and contained an introductory letter explaining the research, the ethical clearance certificate, and the participant information sheet. Potential participants were invited to contact the researcher via email or the Telegram application if they required more information about the research and/or were interested in being interviewed. Of the students who contacted the researcher, 16 were via email and 3 via Telegram. Once the researcher answered all student questions and confirmed a student wished to participate, the researcher sent each participant two consent forms: informed consent and digital audio recording consent form and requested the student sign each and return these to the researcher before the interview date and time were

confirmed. For convenience, the first 15 participants to respond became the realised study sample.

When all completed consent documentation was received and filed in a secure electronic folder, two possible interview dates and times were suggested to each participant, with the additional option for the participant to inform the researcher should none of the proposed interview dates be convenient to them; this was in order for them to come to an agreement regarding the best interview date and time for the participant.

At the start of the research process, it was anticipated that interviews would be conducted face to face, however due to strict COVID-19 lockdown regulations all interviews needed to be conducted remotely. Every participant was informed of the proposed duration of the interview (60 minutes) and asked if an online or telephonic interview was suitable; being mindful of time, data considerations, and device access. All 15 participants requested to be interviewed online via the Microsoft (MS) Teams application, as all university students had access to this online application. The researcher set up online meetings and sent the meeting link to every participant via their student email. Each participant was given a pseudonym, which was the title of their online interview link. With the link provided, participants were able to join the session via their laptop, tablet, or cell phone. Participants were given the option to switch their camera on or not, depending on internet bandwidth and comfortability. Online interviews were conducted from 29th April to 08th September 2020.

The researcher practiced her interview skill prior to this project, she conducted three interviews of senior colleagues within the university, which were audio recorded for a master's degree assignment. It is important for the novice interviewer to practise their interview technique repeatedly under supervision in order to become more comfortable and to become attuned to themes which may emerge during the process.[78] As a novice interviewer the researcher sought guidance from her supervisors and shared early interview recordings with them for feedback regarding interview technique.

The Interviews

At the start of each interview the researcher introduced herself, briefly explained the interview process and what would occur. Participants were given the opportunity to ask additional questions before the start of the interview and due to the sensitivity of the topic were again informed that anonymity would be maintained. Additionally, participants were told that they had the right to omit answering certain questions and could withdraw from the interview at any time without consequence, should they feel uncomfortable or unable to continue. Participants were informed when the interview recording started and that a copy of the interview recording would be available to them on request. The researcher started each interview with the following 'icebreaker' question "Why did you choose to study medicine?". This question aimed to get the conversation started and establish basic rapport, after this question the researcher asked the study questions. During the conversation, the researcher took notes as participants spoke and asked questions based on what was expressed by the participants, the researcher also continually encouraged participants to elaborate or expand on meanings and thoughts expressed.

During and after each interview the researcher took notes of how best to conduct future interviews; from the introduction to the way questions were asked; utilising these noted techniques in subsequent interviews. After each interview, the researcher started to learn better interview techniques i.e., to listen instead of lead, discover rather than direct, and during discussions with her supervisor, determined better ways to conduct subsequent interviews.

Post-Interview

Every interview was recorded via MS Teams by the researcher, interviews were then downloaded and saved in a password protected electronic file on the researcher's laptop. The researcher shared the interview recordings with her supervisors by creating a password protected MS Streams group, which allowed them to listen to the interview recordings. Phenomenographic interviews are typically recorded and transcribed verbatim for subsequent analysis. All 15 interviews were transcribed verbatim from audio recordings, and all transcriptions were saved in a password protected electronic Word file. Participants were given the opportunity to review the

final recording and transcript as a true reflection of the interview. No participant requested a review. Transcripts were reviewed while listening to interview audio recordings, this helped the researcher get a general overview of the interviews and functioned as the start of the data analysis process.

Trustworthiness in Phenomenographic Research

In the research process, it is important to establish the credibility of findings presented. It is suggested that researchers answer the following questions to determine research rigour; 1.How did the researcher establish that findings presented are genuine?, 2.How can we determine the applicability of the findings in other settings/with other responders?, 3.How can we know if the same findings would be repeated with similar participants in the same context?, and 4.How can we determine if the findings come solely from participants and are not influenced by the researchers?[83] Qualitative research approaches are diverse, consisting of a variety of philosophical paradigms and therefore requiring different criteria for answering the four questions mentioned .Golafshani[83] informs us that Lincoln and Guba propose that for qualitative research trustworthiness can be established by the following four criteria Credibility (internal validity), Transferability (external validity), Dependability (reliability) and Confirmability (objectivity).[85] These four criteria were used for this phenomenographic study.

Credibility

Credibility is the confidence that can be placed in the truth of the research findings, confirming whether or not the research findings represent acceptable information drawn from the participants' original data and is a correct interpretation of their original views.[85] In this project strategies used by the researcher to establish credibility included practising her interview technique with supervisor checks, clarifying researcher bias by declaring and accepting her positionality relating to the study context and keeping a field journal to demonstrate her conceptual lens and introspection during the research process. The journal helped the researcher to reflect on comments and experiences mentioned by the participants, introspect on her own experience of the same context and understand her connection and need for intentional

separation from the study participants. Taking personal notes assisted with future interviews and validated her own lived experience.

Transferability

Transferability refers to the degree to which the results of qualitative research can be transferred to other contexts with other respondents i.e., generalizability for the interpretivist.[85,86] Transferability has been enhanced by providing a clear context of the country, its socio-political and higher education history, clear context of the medical school, its medical programme and in-depth class demographic of those who were invited to participate as well as the realized study sample. These detailed descriptions will help other researchers to make a judgement about the findings fitting in with their contexts and further to replicate the study with similar conditions in their settings.

Dependability

Dependability is important as it determines whether the findings of a study can be consistently repeated if the inquiry is to be replicated with the same or similar respondents in the same or similar context. Dependability is established by clear stepwise documentation of the research process, auditing, coding, and re-coding during the research process.[85,86] This research study describes in detail coverage of the methodology and methods used, allowing the reader to assess the extent to which appropriate research practices have been used and followed. This detail included outlines of the study design, its appropriateness and implementation, in-depth details of data collection and methods utilised, along with clear field and journal notes.

Confirmability

Confirmability is the degree to which the results of a study can be confirmed by other researchers, which helps to establish that the data and interpretations of the findings are solely from participants and not based on the primary researchers' biases, interests, and perspectives.[83,84] During this study there were consistent weekly consultations with the study supervisors to discuss findings, develop phenomenographic categories and variations.

Ethical Considerations

The protection of research participants through the application of appropriate ethical principles is important in research.[85] The responsibility of ensuring that this research project was conducted ethically lay with the researcher, who under the guidance of supervisors, made sure that all phases of the study were carried out in an ethical manner, especially abiding to ethical principles when choosing potential research participants. Arifin[87] suggests five ethical issues that must be considered in research namely, Informed Consent and Voluntary Participation, Anonymity and Confidentiality, the Interview session, Data Analysis and Dissemination of Findings and Data Protection.[87] The first step being establishing ethical approval to conduct the study, the following permissions were obtained to conduct this research.

Ethical Permission Requested and Obtained:

Permissions to conduct the study were requested and obtained from:

- The Postgraduate Assessors Committee Researcher Assessors Panel 30th September 2019. (Annexure A)
- Head of School of Clinical Medicine, Prof Daynia Ballot, as the study cohort (final year medical students) belong to the School of Clinical Medicine in the Faculty of Health Sciences, 1st October 2019. This allowed the researcher to obtain demographic data of the study cohort. (Annexure B)
- The University of the Witwatersrand Human Research Ethics Committee (HREC) Medical on 12 March 2020. Unconditional Approval. (Annexure C)
- The University of the Witwatersrand Deputy Registrar, Mrs. Nicoleen Potgieter on 11th February 2020. This allowed the researcher to conduct research on university premises, and/or involving staff and/or students at the University as research participants. (Annexure D)

Informed Consent and Voluntary Participation

In ethically considered research, consent is voluntary (freely given). Participants understand what is being asked of them and must be competent to give consent. It is important that participants are fully informed about the study and have the power of freedom of choice to allow them to decide whether to participate or not.[87] All potential participants were sent an email informing them of the purpose of the study with the contact details of the researcher (email and Telegram) should they choose to participate. The email contained the participant information sheet with full details about the research study. When contacted the researcher gave time for potential participants to ask questions so she could address any concerns. After which she electronically provided every potential participant with two consent forms to complete: written informed consent and digital recording consent forms. The researcher requested that the participant read the forms, then sign them, and send back both forms, indicating their permission to be part of the study, before she suggested potential interview dates. This turnaround time was typically four days.

Anonymity and Confidentiality

Anonymity and confidentiality of the participants was established by giving each participant pseudonyms in place of their own names, and by not revealing their names or any form of identifier in the data collection, analysis, and reporting of the study findings. Privacy and confidentiality of the interview environment were managed during and after the online interview session, data analysis and dissemination of the findings. Further, in the participant information sheet, participants were requested not to discuss the interview with peers.

Interviews and Beneficence

During the interview process, it was important to ensure the well-being of the participant, who also had a right to protection from discomfort and harm elicited by the interview session. Each interview was set up via a private meeting link by the researcher, emailed directly to the participant, which they could use to join the one-on-one interview meeting. The researcher is the

only one who can match the identity of the participants and voice recordings. It was explained that as their participation was voluntary, withdrawing from the study at any point would not affect their academic marks, clinical rotations, or any aspect of their degree. Additionally, they could choose not to answer questions should the question cause discomfort. Due to the sensitivity of the study, contact details for counselling services were made available to participants. Counsellors are available free of charge via the Faculty Office of Student Success. Participants were also encouraged to ask the researcher any questions during or after, about the research. If participants had any concerns or complaints regarding the ethical procedures of the study, they were provided the details of the Chairperson and Senior Administrator of the HREC (Medical) Committee to contact.

Data Analysis and Dissemination of Findings

Identities of the participants were removed during data transcription, including their names and/or any significant identifiers. Participants were always referred to by their pseudonym names in the transcript or verbatim quotes. All consent forms or any document which contains the participants' personal detail was kept in a password protected electronic file solely accessible by the researcher. Participants were however, notified that their demographic data would be used for the purpose of reporting the data from the interview. Data was shared with two qualitative researchers, the researchers' supervisors, for the purpose of reaching agreement of the interpretation without exposing the participants' details at any stage. The access of the supervisors to the data was explained to participants and consent regarding this matter was obtained.

Data Protection

Some data analysis was conducted simultaneously with the data collection and transcription process. The data was privately shared with two qualitative researchers via a secured Microsoft Streams group. Data was stored in an electronic folder which is password protected, with the password only known by the researcher. Hard copies or written materials of the data were kept in a secured cabinet in a locked room with no access to others to ensure adherence to legal

requirements and ethical guidelines. Written and electronic data from this study will be stored for five years. However, the interview recordings will be disposed once they are no longer needed. The researcher was aware that any unexpected adverse event which was caused by this study should be reported to the HREC (Medical), however, no such event occurred throughout the study period. The results of the study will be reported and disseminated through a research report, peer reviewed scientific journals, conference presentations, and the online university library. All anonymised data will be securely stored for a period of ten years in accordance with the University of the Witwatersrand guidelines.

Chapter Four: Findings and Discussion

Various phenomenographic analytical methods exist, the method of analysis used in this report is outlined in the methodology chapter. The specific analysis steps used by this study was Sjöström and Dahlgren's seven-step process for phenomenographic data analysis[88] for two reasons: first, these seven steps are easy to understand for the novice researcher and second, the steps do not conflict with the other available processes.[88-90] The steps are as follows: 1. Familiarization, 2. Condensation, 3. Comparison, 4. Grouping, 5. Articulating, 6. Labelling, and 7. Contrasting.[88]

Step 1 Familiarization: The researcher printed and read all transcripts repeatedly while simultaneously listening to the audio recordings, in order to familiarize herself with the data. Notes and sections of each interview were manually highlighted. The researcher immersed herself in the data to ensure in-depth understanding of the text and to get accuracy of context.

Step 2 Condensation: Relevant recurring feelings, words, and experiences participants used were identified, grouped together and recorded as patterns. This was done in order to uncover repeated patterns or similarities in the data.

Step 3 Comparison: The researcher studied and discussed patterns with supervisor in order to identify similarities and differences in the patterns.

Step 4 Grouping: Patterns were sorted into initial Categories of Description according to the similarities of their essence and how the categories described the participant's experience of the phenomenon - symbolic access.

Step 5 Articulating: Categories were read and discussed between researcher and supervisor to identify the essence of each category. The main aim of this step is to set up boundaries between the categories.

Step 6 Labelling: After confirming the categories, the next step was to distinguish features between them, these become the Dimensions of Variation, and label them accordingly.

Step 7 Contrasting: Discussion and reviewing of categories of descriptions were held between the researcher and supervisor. Categories were contrasted and thoroughly defined in order to be clearly distinguished and arrive at the four categories in this study.

The process of articulation, labelling and contrasting (step 5-7) was iterative, which is true to the nature of phenomenographic data analysis. The end goal was to define categories which best represented the qualitative variations of the phenomenon from the participants' responses.

Findings/Results

Phenomenographic analysis results can be presented in three steps, first an introduction to the CoD's, followed by an introduction to the DoV's, and lastly the presentation of the Outcome Space, which is a visual representation of the intersection between the CoD's and DoV's.

Categories of Description

Four Categories of Description were identified during the seven-step process of data analysis. These expressed the collectives' experience of symbolic access.[91] Each CoD demonstrated different ways the phenomenon was understood or experienced by the participants. The four Categories of Description are 1: Rejection, 2: Disregard, 3: Alienation, and 4: Actualization. In phenomenography it is impossible for one quotation to illustrate all aspects of the category described, but one appropriate quote can be selected which emphasizes the differences between categories, more than their commonalities.[92] This study used a minimum of one and maximum of two quotes to emphasize difference.

Category of Description 1: Rejection

Rejection was the experience of students feeling unwanted in the community. It was most prominent during the pre-clinical years and carried into the clinical years in varying intensities. Students expressed conversations and experiences with educators which elicited feelings of rejection in the community.

"The one doctor said she never signed an agreement to teach students. And she said that blatantly in our face, and we're like, were you never once a student?"
Participant GECG15

"The one doctor went so far as to question, she was basically, like, I don't know why the university allows this whole graduate entry thing...and then in my mind, I'm just like, you're basically questioning why I'm here."
Participant SBG12

Category of Description 2: Disregard

Disregard was the feeling of not being recognized by the community. It was experienced due to various events, from poor teaching efforts during the pre-clinical years to a complete lack of acknowledgement from clinical educators during the clinical years.

"Many times, a consultant would come do the ward round with everyone there, no hello to us or anything, then once the round is over, they leave, without even recognizing we [students] are there. And that's it".
Participant SBB14

"To me it seemed like it was an additional duty of the clinician to deliver a lecture, but not necessarily a primary duty, or seen as a primary thing to be accomplished – or an important thing to be accomplished. More as a side thing"
Participant SWB8

Category of Description 3: Alienation

Alienation was the experience of separation and isolation from the community. It was most pronounced during the pre-clinical years and continued in varying intensities in the clinical years.

"For me to be honest, Medical School is just not welcoming or friendly. During the pre-clinical years, you're basically sitting in lecture theatres all day, then the clinical years are two years of feeling unwanted".

Participant SWG1

There was always a lack of support until now. There's always been this lacking… With each year, it might be in a different form but there's always a lack of support.

Participant SBG9

Category of Description 4: Actualization

This category expressed the collectives' realization of symbolic access; three broad dimensions of variation contributed to this realization: 1. Relationships with peers, 2. Clinical skills teachings during the pre-clinical years (3rd and 4th year), 3. Clinical immersion and participation during the clinical years (5th and 6th year) (as per phenomenographic methods the researcher used a minimum of one and maximum of two quotes per dimension below)

"… I always said that going to lectures and listening to a lecturer with your classmates is sort of like thinking, hey guys, we're in this together."

Participant SBB14

"And then, in 3rd and 4th year with clinical skills, I felt like the teaching was good and educators were very nice people. Very nice. They understood students, what students need, you know. So, I think clinical skills in 3rd and 4th year, we had good educators."

Participant SBG4

"…I felt like they [clinical skills educators] were younger and they understood [us], I felt like they were very empathetic and understanding, or understood what students go through. They would make that extra effort."

Participant SWG1

"It was very nice to be in the hospitals, to actually manage the patients, see the conditions that you've heard the theory about."

Participant SBB7

"And then I did student internship. I thought that was really cool. I really enjoyed internship. I think the nice part of that was that for once there wasn't such a focus on bedside tutorials and I was working with the team".

Participant SBB4

Dimensions of Variation

In phenomenography categories of description are experienced through dimensions of variation, dimensions are a collective of similar events found in the data. The five dimensions of variation discovered in this study were: 1. Interactions with Educators, 2. Relationships with Peers, 3. The Educational Environment, 4. Race and 5. Hierarchy. The interaction of these dimensions and the four categories expressed how students experienced symbolic access in the medical community is depicted in the Outcome Space.

The Outcome Space

The Outcome Space is the integration of the categories and dimensions, it gives a visual representation of how the phenomenon was experienced at a collective level. It can be represented as a diagram, table or figure. Three outcome space figures exist: hierarchal inclusive, with categories presented in taxonomy format, climatic, in which categories are arranged according to the level of the explanatory power, and chronological, which represents the development of the participants' experience of the phenomenon.[86,90] This study presents its outcome space in two ways, first using a chronological figure (Figure 4.2), this method shows the development of how participants experienced symbolic access. Initially, participants expressed limited experience of symbolic access but as they developed relationships with peers, attend clinical skills lessons and progressed to the clinical years, there is growing perception of the

phenomenon. The second representation is in a table format (Table 4.1), it gives a more detailed representation of the outcome space. A discussion of the outcome space will be elaborated in the discussion section.

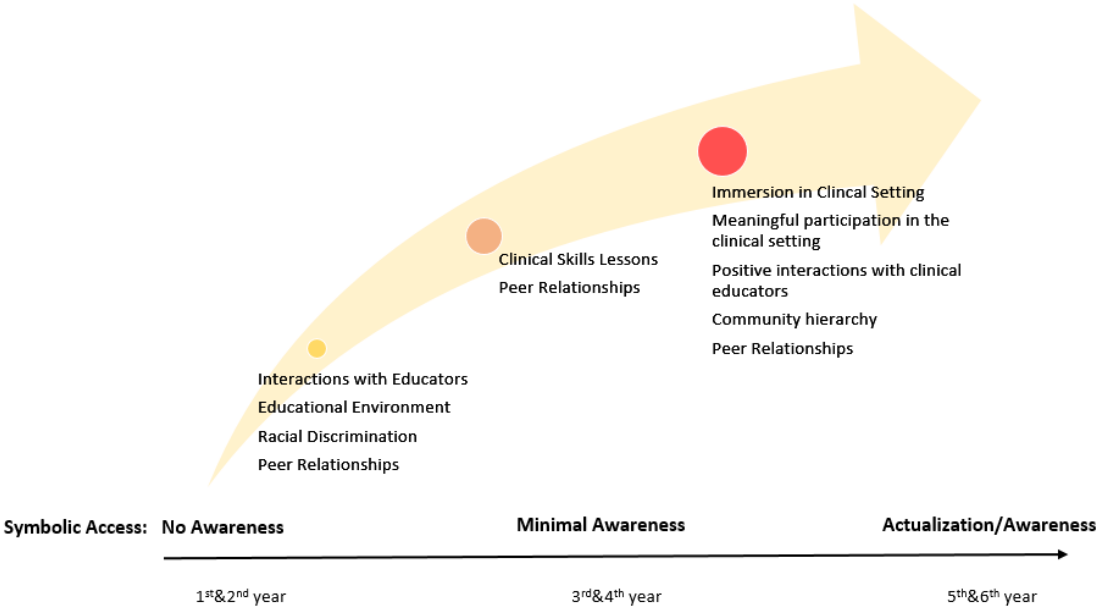

Figure 4.1: Chronological Outcome Space

OUTCOME SPACE					
Categories of Description:	**Dimensions of Variation**				
	Interactions with Educators	**Relationship with Peers**	**Educational Environment**	**Race**	**Hierarchy**
Rejection	**No initiation** by educators to develop educator-student relationships.	No rejection noted in relation to relationship with peers.	1st-4th year: Students **not welcomed** by medical community. 5th&6th year: Feelings of **illegitimacy** in the community by students.	**Exclusion** and **poor community identification** by SoC.	Sense of rejection due to hierarchy.
Disregarded	1st-4th year: Students **not recognized** by community. Clinical Years: Students **ignored** during significant community events.	No disregard noted in relation to relationship with peers.	1st year: Students **completely ignored** by medical community. 2nd-4th year: Students on medical campus but **not prioritized**. 5th&6th year: stressful often with **little support** from educators.	**Neglect** and **othering** of SoC based on race.	Clinical setting of medical community extremely hierarchal, medical student always **at the end of the queue.**
Alienation	Significant **isolation** during early years of the programme.	Minimal academic alienation based on race between peers.	1st- 4th year: Students **separated** from the medical community in lecture theatres.	Sense of **estrangement** from the community.	Sense of vulnerability and isolation.
Actualization	3rd and 4th year: Clinical Skills educators source of community **acceptance.** 5th&6th year: **Recognition** and **prioritization** close to graduation.	Facilitated a sense of **community** and **identity development**. Students **'seen'** by peers. **Source of comfort** and **guide** for students to navigate the academic and clinical space.	3rd and 4th year: Clinical Skills lessons opportunity to learn skills to be used in future. **Safe environment.** 5th&6th year: Opportunity to **meaningfully participate**.	Positive experiences of **encouragement** by seniors of same race.	Hierarchy a **rite of passage** into medical community.

Table 4.1: Tabular Outcome Space

Discussion

Introduction

The discussion brings 'life' to the study, it expresses the meaning of the data and findings, highlighting their importance and contribution to the particular field of study.[93,94] This discussion chapter is divided into three parts; Part I: The Outcome Space, what does the data mean? Part II: Awareness of Symbolic Access: Do you feel like you're part of the team? and Part III: How does symbolic access impact learning? These separate sections aim to unpack what was found in the outcome space, linking it to the research aims, objectives and literature.

Part I: The Outcome Space, what does the data mean?

We see two narratives described in the outcome space, the first major narrative is of exclusion, this was experienced through four categories of the outcome space: rejection, disregard, alienation and racial discrimination. These categories were perceived through the following dimensions of variation: interactions with educators, the educational environment and racism. The second minor narrative from the outcome space was of inclusion defined as actualization- the remaining category of description. Inclusion was primarily experienced through peer relationships, clinical skills lessons, hierarchy and clinical participation. The following paragraphs will expand in detail on how exclusion and inclusion were perceived, by merging the categories of description and dimensions of variation.

Exclusion

Interaction with Educators

During the first four years of the programme educators and students engaged in a 'transactional relationship'. This relationship consisted of educators delivering knowledge to the students, who in turn transacted this knowledge back to the lecturers in exams, no overt effort was made by educators to socialize students into the medical community or to develop relationships. Although students had the title of medical student, it did not translate to their lived experience and instead of developing community identity and belonging, students identified as general university students. The early medical years were cocoon-like, where students existed apart from the

community and had very limited opportunity to bond with their educators. The impact of these isolated pre-clinical years on the medical students' sense of belonging, was the feeling of community legitimacy rooted in their ability to transact information successfully and progress academically.

In the clinical years meaningful interactions with educators were fluctuant, explicit rejection and alienation were interspersed with sporadic episodes of recognition and inclusion. The teaching and learning atmosphere was largely shaped by the personality of consultants (most senior doctors in the unit) meaning these interactions were unpredictable and varied but were often expressed as predominantly exclusionary in nature. Students struggled to concretize relationships with senior educators, as interactions rarely went beyond scheduled one hour bedside tutorials. A significant amount of the students' time was spent with less senior community members i.e., registrars, medical officers, or interns whose main objective was service delivery. Stark[95] explains that the fragmented student-educator relationship found in the clinical setting is common, there are examples of high quality and inspirational interactions alongside deep humiliation and being made to feel unvalued.

"In the actual hospitals I had some good experiences, Like in Obstetrics, I had a doctor,- he was so nurturing. He would like challenge you and then, in challenging you, it would inspire you to read more. Like, we found ourselves reading articles; I mean, who does that in GEMP 3? And then we found that we actually did really well because we were so interested and engaged. Even in the ward round he made us a part of the team."

GECG15

"…And we have had those experiences – [doctors] who can be quite… who criticise and actually are not shy to tell you that you're stupid and incompetent, and I think that that doesn't facilitate learning with our generation at all."

SWG5

"The learning environment is also shaped a lot by the consultant's personality"

SIB2

In medical education relationships and socialization are fundamental for students; these events serve as the enculturation bridge for the 'outsider' into the community. Worley[96] asserts that medicine cannot be learned without relationships, and curricula that ignore or take them for granted do so at their students' peril. During the initial years of a university programme, the onus to structure, initiate and encourage academic relationships lies exclusively in the educator's court, as they have the responsibility of creating the overt curriculum, and should be cognisant of the hidden curriculum.[96] Lyon[97] encourages established community members to have a clear and well-articulated view of the medical student's role in the community, intentionally design curriculum and opportunities that provide accessible relationship platforms for the student.[97,98]

Educational Environment

Alienation from the community was described across two paradigms , the physical environment and the educational climate.[99, 100] Students' experience of the physical environment mirrored their relational experience with educators, i.e., feelings of rejection and disregard and isolation. The entire first year of the programme was situated off medical school campus, the impact of this physical distance came across strongly as the students described their struggle to identify and associate with the medical community. Exclusion continued in subsequent years, 2nd -4th year, when students were again isolated from the medical community, as a large amount of their academic time was spent in didactic teaching lessons, which were delivered in the same lecture venue for an entire year. There was an expression of deep disappointment by these aspiring doctors to be, who found themselves confined to university spaces, while longing to be in clinical settings.

The outdated medical school building and infrastructure, which has remained unchanged for some 20 years- added to the feelings of neglect and isolation students felt, learners wondered why they were not deemed important enough for the community to create inspiring learning spaces. Nordquist et al[101,102] state that the physical educational environment in higher education is a concern globally, explaining the scary realization that development of physical-learning spaces in higher education essentially stopped some 150 years ago. Very little effort is made on the part of medical faculties to create stimulating and appropriate learning environments for the medical student, who must self-negotiate these lifeless spaces together with experiences of separateness. [101,102]

The educational climate was primarily of the clinical years, the climate was described as unsupported and anxiety provoking. The complexity of managing a new learning environment and the clinical workload, coupled with poor support from clinical educators left students feeling alone and vulnerable. Kennedy et al[103] describes the clinical setting as ruthless, autonomous, and stressful; newcomers are required to not only demonstrate their academic ability, but also the ability to work in an environment which contains literal life or death pressures. Shacklady[104] and Ahmed[105] confirm that the transition from pre-clinical to the full-on clinical environment increases anxiety levels for the medical student. Students have to deal with multiple new 'hits' at once and these factors generate high emotions, which are mostly negative. The complexity of this environment often leaves students feeling combinations of fear, anxiety and confusion. [104,105]

Race

Experiences of racial discrimination uniquely moulded the Student of Colours' (SoC) time in medical school, descriptions of race-based community exclusion was a repeated narrative. Social and academic alienation were described, as well as feelings of disconnect from the community culture. SoC's told stories of favouritism towards certain race groups during teaching sessions, ward rounds and in examinations. There were deep feelings of being othered within the community. Few senior role models looked like the SoC, which made mentoring and a sense of relatability difficult for the SoC student in the community. SoC's experienced two 'exclusionary

hits', the first SoC's experienced broad alienation from being an outsider in a new community and second specific alienation being a medical student of colour in the community. Beagan[106] explains that medical schools are spaces where exclusion based on race is frequently described, students from racialised groups often describe mundane daily community practices which intentionally or unintentionally, other, exclude or alienate them.

"So, race played a huge role in the exams. What would happen is, you know how we do our OSCEs. We only had one examiner, and most of them are white. There are only a few black examiners, from what I've seen. I feel like some of them don't believe a black person deserves to get an 80%. So, some people will just be like black people don't really know much. Or as a black person you need to work very hard to prove yourself."

SBB7

'Some doctors would just come; they don't say anything to black students. So, whenever they ask questions, [during ward rounds] they ask the white students. In my experience some of them focused more on the white students."

SBB14

White participants did not discuss experiences based on race. Beagan[106] explains this by stating that SoC's often highlight their experience of racial exclusion for two reasons; it is their lived reality and the SoC is made acutely aware of their difference every day in the community. Literature highlights that most medical school culture caters largely for the White student, who more easily assimilates into its community and way of being. Despite its importance, there has been a noticeable lack of attention on how institutional racism is perpetuated by medical schools. Racist experiences are brushed off, culture remains and the profile of faculty members, particularly at senior levels, remains dominated by white staff, particularly men.[107-112]

"The moment you walk [into] Medical School, the groups of people are just… It's divided along racial lines"

SBB14

… I noticed that you really get treated differently in terms of race. Like, on our first day. We are a group of three brown students – so we get there, and there was no introduction whatsoever. It was just like, oh hi, you're the students, okay, let me show you where the stuff for bloods is… The following week, the GEMP… three students joined us and both of them were Caucasian. And the way they were greeted; there were like formal introductions and at each patient there was a short summary, or kind of an assessment thing – like this patient, this. And the whole week prior to that, we had not ever been acknowledged as being in the ward.
GECG15

Yes definitely. There weren't many black doctors, actually. Within each block, maybe out of 20 tuts, four would be from black doctors. Obviously, it's different. Black doctors were usually nice but then you'd get those black doctors who were biased towards white people.
SBG13

"I'm just saying these racial biases that exist in the institution – I don't know if it's a consequence of the institution, but I would like to think that it's more a consequence of the people within the institution. Like, you have certain people who still believe or horde those racial biases, so I'm not so sure how the university can change that"
SBG12

Unfortunately, negative experiences are not uncommon in medical education and are documented globally. The culture of student exclusion is ingrained, with recurring student stories of humiliation, dehumanization, and alienation from the medical community.[113-115]

Inclusion

The second minor narrative from the outcome space was of inclusion, i.e., the actualization of symbolic access. Inclusion was informed by peer relationships, clinical skills lessons, meaningful clinical immersion and participation, and hierarchy.

Peer relationships between student contemporaries and between senior and junior students was the first 'welcome' students received into the community. These informal relationships were a consistent source of inclusion and affirmation for students, functioning as encouraging support systems, both academically and socially. Eberle et al[116] describe peer relationships in medical education as, a community of practice (CoP) within a CoP, explaining that through such essential relationship's newcomers acquire vital knowledge of community culture and learn how to participate in the CoP in a meaningful way. Through intra-communities' students were able to establish feelings of legitimacy in their new community. Junior students were ready to listen and participate when seniors shared knowledge of how to navigate faculty members' expectations; and senior students were quick to share personal strategies of how to become successful academically and socially in the community.

"When you go to Med School, you have to rely on your friends, I would say, to make the environment more lively and do well. I think one of the good things about being in res is that you have too many connections, so even if your main group of friends are not there, there's a lot more students that you know that you can get there, and because you know them, you know a lot more students after that."

SIB2

" A lot of them (senior students) had programmes where the older girls would teach the younger girls. And so, a lot of influence from the older people was what encouraged us to get help, because they said it was better getting help earlier and having someone who knows tell you what's hard and what to expect.

SBG10

"So, learning to figure out what they [doctors] like and what they don't like. And it was a lot of word of mouth as well, because you had to ask other students from other hospitals what their consultant liked because you know that they examine you"

GEWM5

Additional data found that peer relationships could be marginally determinantal to students' success, as participants described peer cliques based on race or religion in which academic resources were exclusively shared, leaving others out. This was a minor but noteworthy finding as it helped paint a comprehensive picture of both positive and negative aspects of peer relationships. Despite this peer relationships were found to be positive overall and added to feelings of acceptance for the student.

"You can get academic information based on your race or religion, that's why I tried to make friends across racial and religious lines. For example some past papers were in the 'Black drive' [which is for Black students] and some Muslim students had other academic resources. So, it's really about who you become friends with."

SIB2

Clinical skills teaching sessions were deeply inclusionary and affirming sessions for the medical student. During these simulated lessons students learnt and participated in meaningful community traditions like wearing scrubs, using medical equipment and performing clinical examinations. This educational experience was coupled with positive community socialization with a consistent group of young clinical educators who taught the students, in small groups, every two weeks for two years, and who created an encouraging, safe and inclusive teaching environment. Hasan et al[117] explain that the nature of clinical skills teaching lends itself to relationship development; small groups, interactive sessions, and continued guidance create a favourable climate for positive educator-student relationships. Medical students' view clinical skills teaching as non-threatening and optimum, a time of strong affirmation from community educators. [95,117] These teaching sessions were the early foundation for symbolic access for these

students, as through these lessons' students' awareness of their medical identity began to take shape.

Clinical immersion and meaningful participation in the clinical setting, both of which occurred during the final two years of the programme, were chief inclusion events. Being in the hospital, receiving bedside teaching, managing patients from admission to discharge, recognition during community events, and acknowledgement as junior colleagues from senior educators largely shaped students' identity and boosted their sense of belonging within the community.

Hierarchy as inclusion?

While all other 'inclusion events' could be quickly explained, the experience of hierarchy as inclusion warranted deeper unpacking. The culture of hierarchy is a well-documented feature of medical communities and is much more evident in the clinical training environment where students have maximum interactions with community members. Upon entering the clinical environment students find themselves at the bottom of a very long and steep ladder of hierarchy.[118,119] Despite it being experienced in a deeply negative way, hierarchy was understood as a form of initiation, that every medical student experiences in order to be deemed "tough enough to do medicine". Ultimately it was seen by the students as a necessary experience to acquiring community inclusion.

"…I think the suffering [laughing]…It makes you feel part of the team, too."
Participant SBG10

"We all go through it [hierarchy] …*We all have to go through it*, of course, but it's not always easy." Participant SWG1

For the medical student, the development of community identity is as a result of multiple events that are considered rites of passage in the community, these range from cadaver dissections to the wearing of white coat or the loss of one's first patient.[120-122] The experience of hierarchy functioned as an additional rite of passage for the participants, contributing to feelings of

inclusion and the evolution from student to junior doctor. Vanstone et al[118,119] explain that hierarchy in medical education creates a social framework for the student, who can establish awareness of 'their place' in the community. While exploring hierarchy as a form of inclusion the researcher notes that current literature explains events which lead to community inclusion but lacks exploring whether the essence of these events are negative or positive. Further research into this phenomenon is warranted but will not be explored for the scope of this study.

Part II: Awareness of Symbolic Access: Do you feel like you are part of the team?

In light of the outcome space's double narrative further reflection of the interview data was required, the researcher sought to discover how this narrative related to students' overall awareness of symbolic access. Deeper reflection revealed that despite deeply exclusionary experiences overall students recognize that they had gained symbolic access within the medical community. This awareness of symbolic access was revealed by the collective's ability to identify with the community and its culture. In various ways students identified themselves as part of 'the team' or explained that they were confident of 'their role' in the community.

Researcher: Do you feel like you're part of the team? [medical community]

[Chuckling] "For the most part yes, I do."

Participant GEWB5

"Yes, in final year, in 5th year, they [seniors] aren't really checking for you, but…final year, they really do make you feel like part of the team; well, in every rotation I've been in so far… "

Participant SBG10

"I generally do. Like I understand what the job of an intern is. I understand it."

Participant SBG3

Experiences which contributed towards the students' awareness of symbolic access, included most of the events which facilitated their feelings of inclusion, namely: 1. Clinical Skills lessons

and educator relationships developed during these lessons, 2. Being in the hospital and receiving bed side teaching, 3. Managing their own patients, 4. Performing clinical skills in the hospital setting, 5. Working with future colleagues in the profession and 6. The experience of community hierarchy. Medical education literature emphasises that the main factors which contribute towards medical students' sense of community belonging and professional identity include 1. Doing the work of the doctors, 2. Increased patient interaction, 3. Time spent in the hospital, 4. Being treated as healthcare workers, 5. Increased responsibility, and 6. Seeing their role models in action in the workplace.[123]

In their educational theory, Situated Learning, Lave and Wenger theorise that within the medical setting the experience of community immersion and participation facilitates the development of community identity and belonging.[116] These authors explain that in a CoP newcomer participation and the learning of community attributes such as vocabulary, skill, knowledge, and responsibility facilitate the newcomers progress from what they call a Legitimate Peripheral Participant (LPP), into a community member (Figure 5.1). They add that an important and concluding aspect of full participation in a CoP is the acquisition of the identity associated with the community.[12,13,116]

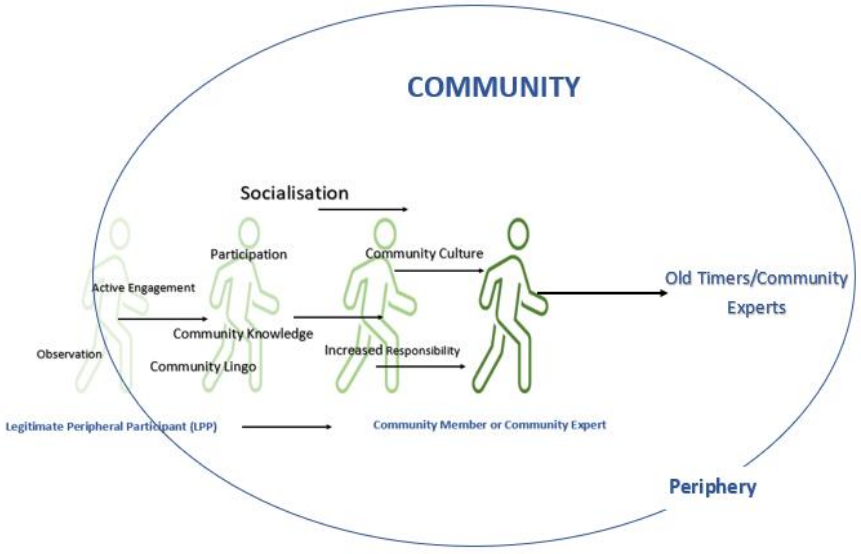

Figure 4.2: Progression of legitimate peripheral participant in community of practice[12]

Medical students articulate an awareness of symbolic access in the community, this awareness is facilitated through noteworthy events and experiences during the pre-clinical and clinical years such as clinical skills lessons, clinical immersion and participating meaningfully in the clinical setting. While strong negative events are experienced, these do not deter the awareness of symbolic access and can ironically contribute towards the awareness of it.

Part III: How does symbolic access impact learning?

During the pre-clinical years teaching was mass delivered didactically to classes of 300+ students, leaving little room for interactive and engaging learning opportunities. This teaching coupled with poor educator-student interactions resulted in student learning being defined as isolated, mentally overwhelming and disconnected from 'real medicine'. One exception to the negative pre-clinical learning experience was clinical skills teaching and learning. These sessions were valued by the student body, who appreciated small group learning, and described the learning environment as supportive and conducive.

"…I think in the earlier years I think it was more of self-study… [there was] not much interaction with lecturers".

Participant SWG1

"…the people [educators in pre-clinical years] weren't really approachable at all. They were just very mean and condescending, so it was like- now I just feel worse so why should I ask questions. It's okay, I'll YouTube that."

Participant SBG13

Clinical Skills Learning

"…I do have some good experiences and I think I will start off with that. I think the [good] interactions that I had with the doctors were in Clinical Skills, I learned a lot because they were open to us and allowed for mistakes."

Participant SWG5

"I only spoke to the doctors during Clinical Skills and stuff. That was the only time I interacted with doctors. I felt like most of them were very helpful and I really learned a lot from them."
Participant SBB7

Learning experiences during the clinical years were largely positive. Bedside teaching in smaller clinical groups with real life patients, experiential learning opportunities and clinical immersion bridged theory-practise gaps and created meaningful learning experiences for the students. Learning was tangible during the clinical years and contributed positive perceptions.

"[The learning environment] is better, its *more intimate* because it isn't a class with 300 anymore"
Participant SWG1

"The times when I've been taught at the bedside have been… I think some of them have been really the best learning experiences I've ever had, to be honest…those experiences are *invaluable"*.
Participant SBB14

"In clinical years now, we are in their [clinical educators] setting, they are more comfortable…you learn a lot from them, not only in terms of academics but just how to function."
Participant SIB2

Clinical learning is said to be the cornerstone of medical education, as it is in this learning environment that students are able to participate in the medical community and develop both their clinical skills and professional identity. Medical students often perceive the tangible difference between the pre-clinical and clinical curriculums; and are able to articulate these changes in their learning due to the vast contrast of experiences. [124]

Learning that was valued during the pre-clinical years revolved around clinical skills lessons, during the clinical years valued learning included bedside teaching, clinical immersion and

meaningful clinical participation. The same events, which resulted in students' awareness and attainment of symbolic access, also resulted in students' experience of meaningful learning experiences. Positive learning experiences were not described prior to being aware of or attaining symbolic access (Figure 5.2). Student learning was revived as they gained symbolic access, it facilitated the shift from disconnected, isolated and dead-end learning to applicable, contextual and transformative learning experiences. This study concludes therefore that attaining symbolic access is strongly connected with positive learning experiences for the medical student.

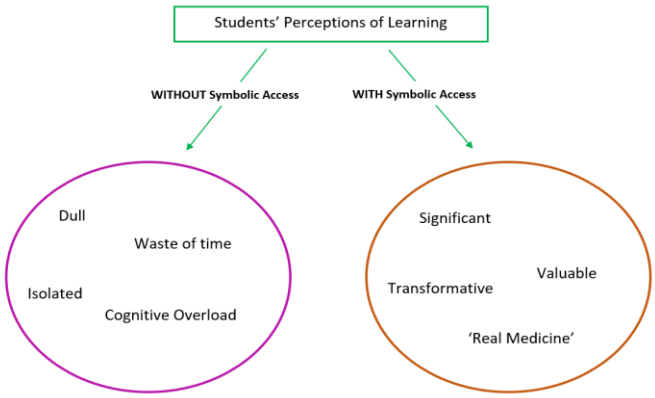

Figure 4.3: Students Perceptions of Learning with and without awareness of Symbolic Access

In conclusion, unpacking how the outcome space related to symbolic access brought to light some interesting discussion points. While experiences of student rejection, alienation and exclusion remain prominent in the medical community, the medical student is able to articulate an actualization of symbolic access. Some negative community events even act as facilitators for symbolic access.

Chapter Five: Conclusion

The study of how students become aware of and gain institutional culture in higher education has not been adequately explored or articulated within the South African context.[38,39] Introducing the concept of symbolic access to institutional culture 'opened up' an alternative exploration route for institutional culture, allowing the researcher to discover and describe experiences which facilitate awareness and attainment of symbolic access to institutional culture for the medical student.

This research discovered that in medical education, symbolic access to institutional culture functions as a 'key' which unlocks meaningful learning experiences and professional identity development for the medical student. In addition, it discovered that symbolic access is influenced both by positive and negative community encounters. Medical educationalists are encouraged to design undergraduate curricula with intentionality, focusing on promoting educator-student interactions, early community socialization and early clinical immersion, as these factors are linked to the attainment of symbolic access and meaningful learning.

Introducing and exploring symbolic access in medical education holds value as it required delving into intangible, yet influential concepts which impact the medical community. This research adds to discussions around qualitative factors that influence student learning and contributes to scholarship of sociocultural factors which impact learning in South African medical and higher education.

Study Limitations

This study was conducted in one medical school setting, making the findings contextual, however the findings linked with literature from other settings. There was scarcity of prior research on the phenomenon under investigation, which warranted the investigation but also meant there was minimal literature to support and elaborate on the phenomenon. The study methodology

chosen, phenomenography, was labour and time intensive. The study sample could not be purposively selected, however convenience sampling resulted in the appropriately diverse sample. Although the sample size was within acceptable limits for phenomenographic study a larger sample size may have added more variation of phenomenon experiences.

While categories were based on words of the participants, the researcher confirms that the interpretation of these words was influenced by the philosophies and interests of the researcher, as the researcher undertook the study due to her interest in the topic. The involvement of the researchers meant that data could not interpret itself or be completely without the bias of the researchers, who developed the categories of description. Readers and researchers are therefore open to scrutinize the categories based on the data given and arrive at a different interpretation.

However, research is a mutual space, shaped by both researcher and participants, hence both identities have the potential to influence the entire research process.[74] While researcher interpretations were used when analysing the data only interpretations supported by the data were retained. Marton suggested that the categories of description relate the collective rather than individuals[57,76] therefore it can be argued that this collective includes the researchers as they conceptualised the research, participated and shaped the interview and the data. While the researchers voice is not explicit in participant transcripts, the researchers do influence the participants' voice.

Recommendations

Using phenomenography as a foundation was fundamental to this research, its pedagogical focus means that the discoveries of this study can be used as recommendations to bridge the gap between research and pedagogy.[125] The following recommendations are informed by the discoveries of this study.

Recommendation 1

A review and redesign of the pre-clinical curriculum in the medical programme, with specific focus on implementing pedagogy that increases student-educator interactions during the first four years of the academic programme. The main aim should be to create meaningful learning opportunities for the students and promote early educator-student relationship development. The current Clinical Skills teaching model functions as an example and template towards this recommendation.

Recommendation 2

Review and re-design of the medical curriculum to include early ongoing clinical exposure in the form of longitudinal clinical clerkships, which spiral from the pre-clinical years (1st-4th) into the clinical years (5th-6th) of the programme. The design of these clerkships should include staggered clinical immersion which increases as students' progress from year to year.

Recommendation 3

Constructional redesign of the physical learning environmen*t* (physical learning spaces both within and outside of scheduled class time: the classroom and campus), in order to create learning environments which, achieve the promotion of learner centred, interprofessional education. This process needs to be facilitated by key roles players namely faculty management, educationalists, architects and students.

Recommendation 4

Scheduled regular individual or group discussions between Students of Colour and educators/staff in management with the specific intent of learning about and acknowledging the student's lived experience. From these engagements, staff and educators should work with these students towards the co-creation of an inclusive medical school curriculum, culture, and environment, with which Students of Colour resonate and identify. Students of colour need to see themselves represented in the curriculum, amongst peers, and faculty, the failure to

recognize themselves in the community, will continually leave the SoC with a feeling of deep alienation.

Recommendation 5

Further scholarship of symbolic access in medical education and higher education, in order to extend understanding of this phenomenon and deepen our understanding of its pedagogical impact. Symbolic access is a new and developing concept, this study has shown that it is a factor that influences student learning in medical education.

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Annexure A

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

FACULTY OF HEALTH SCIENCES

30th September 2019

School of Health Sciences Education
Faculty of Health Sciences
University of Witwatersrand

Dear Professor Aimee,

Re : MSc Research Assessor Corrections: Dina – Ruth Lulua: Student Number 0602100T

As the above-mentioned student's supervisor, I am satisfied that she has made the necessary changes as recommended by the post-graduate assessors committee.

Dr C H Thurling (CHSE)

Hilary.Thurling@wits.ac.za

Mrs S Moch (CHSE)

Shirra.moch@wits.ac.za

Annexure B

Masters in Health Science Education

Research Title: Symbolic Access in the University of Witwatersrand's Faculty of Health Sciences: Medical students' perceptions of the symbolic space and its influence on learning

Signatures

Date: 01 October 2019

Applicants name: Dina-Ruth Lulua

Signature

Who will supervise the project?

Name: Dr Hilary Thurling

Department:

Tel: 011717 2548

Email: Hilary.Thurling@wits.ac.za

Signature

Name: Shirra Moch

Department:

Tel: 011717 2586

Email: Shirra.Moch@wits.ac.za

Signature

Head/Researcher Co-ordinator of Department/Entity in which study will be conducted

Name: Professor Daynia Ballot

Department: Head, School of Clinical Medicine

Tel: 011 4884342

Email: Daynia.Ballot@wits.ac.za

Signature

Annexure C

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

R14/49 Dr Dina-Ruth Lulua

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M191042

NAME: (Principal Investigator)	Dr Dina-Ruth Lulua
DEPARTMENT:	Centre for Health Science Education University of the Witwatersrand Medical School
PROJECT TITLE:	Symbolic access in the University of the Witwatersrand Faculty of Health Sciences: Medical students perceptions of the symbolic space and its influence on learning
DATE CONSIDERED:	25/10/2019
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Dr Hilary Thurling and Mrs Shirra Moch
APPROVED BY:	CB Penny Doctor CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	12/03/2020

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary on the Third Floor, Faculty of Health Sciences, Phillip Tobias Building, 29 Princess of Wales Terrace, Parktown, 2193, University of the Witwatersrand. I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**. The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. In this case, the study was initially reviewed in October and will therefore be due in the month of October each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).

Principal Investigator Signature

Date 12/03/2020

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Annexure D

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

OFFICE OF THE DEPUTY REGISTRAR

11 February 2020

Dina-Ruth Lulua
Student number 0602100T
Masters of Health Sciences Education

TO WHOM IT MAY CONCERN

"Symbolic access in the University of the Witwatersrand's Faculty of Health Sciences: Medical students' perceptions of the symbolic space and its influence on learning"

This letter serves to confirm that the above project has received permission to be conducted on University premises, and/or involving staff and/or students of the University as research participants. In undertaking this research, you agree to abide by all University regulations for conducting research on campus and to respect participants' rights to withdraw from participation at any time.

If you are conducting research on certain student cohorts, year groups or courses within specific Schools and within the teaching term, permission must be sought from Heads of School or individual academics.

No research can commence before ethical clearance has been obtained. Kindly forward a copy of the clearance certificate to this office.

Nicoleen Potgieter
University Deputy Registrar

Private Bag 3, Wits, 2050, South Africa | **T** +27 11 717 1204/8 | **F** +27 86 553 2271 | www.wits.ac.za

Annexure E



Good day

My name is Dina-Ruth Lulua, and I am a Masters in Health Science Education student at the University of the Witwatersrand in Johannesburg. As part of my studies, I have to undertake a research project, and I am investigating students' experiences of learning at Wits Medical School.

As part of this project, I would like to invite you to take part in an interview. This activity will involve a once off interview discussion and will take around 60 minutes. With your permission, I would also like to audio record the interview using a digital device (cellular phone or recorder); the audio recordings will be transcribed. The interviews will take place in a private and convenient space to you, the participant, and you will be given the opportunity to review the final recorded transcript. Additionally, I request that as a participant you do not discuss the interview discussion with your peers.

You will not receive any direct benefits from participating in this research, and there are no disadvantages or penalties for either participating or for not participating. Participating in this study will not affect your academic marks, clinical rotations or any aspect of your degree. You may withdraw at any time or not answer any question if you do not want to. The interview will be completely anonymous as I will not be asking for your name or any identifying information, and the information you give to me will be held securely and not disclosed to anyone else. I will be using a pseudonym (false name) to represent your participation in my final research report.

If you experience any distress or discomfort at any point in this process, we will stop the interview or resume another time. If you need some support or counselling services following the interview, these are available free of charge at OSS 011 717 2565 or 011 717 2008.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website. If you wish to receive a summary of this report, I will be happy to send it to you. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the Chairperson of this Committee who is Professor Clement Penny, who may be contacted on telephone number 011 717 2301, or by e-mail on Clement.Penny@wits.ac.za. The telephone numbers for the Committee secretariat are 011 717 2700/1234 and the e-mail addresses are Zanele.Ndlovu@wits.ac.za and Rhulani.Mukansi@wits.ac.za

Yours sincerely,

Dr Dina-Ruth Lulua

E: dina-ruth.lulua@wits.ac.za

T: 0117172788

Supervisor

Dr Hilary Thurling

E: Hilary.Thurling@wits.ac.za

T: 011 717 2548

Co-Supervisor

Shirra Moch

E: Shirra.Moch@wits.ac.za

T: 011 717 2586

Annexure F

Informed Consent Form

Project Title:

Symbolic Access: Medical students' awareness of institutional culture and its influence on learning.

Researcher: Dr Dina-Ruth Lulua

I, ……., agree to participate in this research project. The research has been explained to me and I understand what my participation will involve. Please circle the relevant options below.

I agree that the researcher may use anonymous quotes in his / her research report YES NO

I agree that the information I provide may be used anonymously by other researchers following this project YES NO

…… (Name of participant)
…… (Signature)
…… (Date)

Annexure G

Consent form for Audio Recording of study participation

Project Title:

Symbolic Access: Medical students' awareness of institutional culture and its influence on learning.

Researcher: Dr Dina-Ruth Lulua

I hereby consent to audio recording of the interview

I understand that:

The recording will be stored in a secure location (a locked cupboard or password protected computer) with restricted access to the researcher and the research supervisor.

The recording will be transcribed and any information that could identify me will be removed,

The recordings will be erased within either (a) two (2) years of the publication of the research findings, or (b) six (6) years, if no publications arise from this research

Anyone wishing to access this information in the future will first have to obtain the approval of the Human Research Ethics Committee (Medical) of the University of the Witwatersrand, Johannesburg

Direct quotes from my interview, without any information that could identify me, may be cited in the research report or other write-ups of research.

Name of Participant: _____
Date: _____
Place: _____
Signature or mark _____

Witnessed by:
Name of Witness: _____
Signature: _____
Date: _____

Annexure H

Interview Questions
The following open-ended questions will initially be asked during the interview

Please tell me about your experience of learning at Wits Medical School.
Can you elaborate on what impacted your learning?

The following prompt questions may be asked during the interview
What has been your experience of educators/doctors at medical school?
What is your experience of the medical school environment?

Annexure I

Dina-Ruth Lulua MHSE Research Report-1.pdf

by Dina Lulua

Submission date: 03-Mar-2023 09:52AM (UTC+0200)
Submission ID: 2027819456
File name: Dina-Ruth_Lulua_MHSE_Research_Report.pdf (1,010.29K)
Word count: 17164
Character count: 98825

Symbolic Access: Medical students' awareness of institutional culture and its influence on learning.



Dina-Ruth Lulua

0602100T

A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Health Sciences Education

Supervisor

Shirra Moch

Johannesburg, 2023

DECLARATION

I, Dina-Ruth Lulua, declare that this research report is my own, unaided work. It is being submitted for the degree of Master of Health Science Education at the University of Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other university.

Signature……..

03 Day of March 2023

DEDICATION

To every writer,

"Writing is hard work. A clear sentence is no accident. Very few sentences come out right the first time. Remember this in your moments of despair. If you find that writing is hard, it's because it *is* hard."

William Zinsser

'On Writing Well' pg 9

Abstract

Background: The discussion of access in medical education commonly has its focus on physical and epistemological access, leaving a qualitative gap regarding sociocultural factors which influence access in this context. This study introduces and defines symbolic access, a concept with a specific lens on sociocultural inclusion, and the impact it has on student learning within a South African medical school.

Objectives: To explore medical students' awareness of symbolic access and their perceptions of its impact on student learning in medical education.

Methods: A phenomenographic design was used with fifteen one-on-one in depth interviews conducted with final year medical students, a group exposed to the entire 6-year medical programme. Interviews were analysed using Sjöström and Dahlgren 's seven-step phenomenography model. Through this model, four Categories of Description were induced, and five Dimensions of Variation were discovered. These two components formed the Outcome Space, a visual representation of the student experience of symbolic access.

Results: The overall experience picture painted in the outcome space was of medical student's exclusion from the medical community and the pre-clinical learning experience which was perceived as irrelevant and disconnected. Experiences which facilitated feelings of symbolic access included peer-relationships, clinical skills lessons and participation in the clinical setting.

Conclusion: Despite exclusionary experiences, students articulated an awareness of attaining symbolic access during the clinical years, additionally meaningful and transformative learning experiences were described during these same years. The study found that attainment of symbolic access and students' perceptions of valuable learning are linked. Health profession educationalists should design undergraduate curricula with early clinical immersion at the fore and explore symbolic concepts pertaining to access, as they are connected to meaningful learning experiences for the medical student.

Acknowledgements

'…It's useless to rise early and go to bed late and work your worried fingers to the bone. Don't you know He enjoys giving rest to His beloved?" Thank you, Holy Spirit.

Smalley, my deepest love, and gratitude to you always. I am truly blessed to share everything with you…especially the completion of this work across 10 African countries!

Mommy, Agasi, Mungufeni, Edoru and Daddy, thank you for all of your prayers, encouragement, and belief in me.

Friends, words are not enough! Thank you.

Lynne 'Slo' Slonimsky you brought out the problem I wanted to solve during our talk that night. Bless you.

Hilary, thank you for always asking me to explain and define what was going on in my head, for every correction, and most especially for being you.

Shirra, you pushed me to look for meaning in every sentence, which helped me to cross a BIG threshold, thank you for helping to birth this baby.

Koki, Trev and *Thakadu*, my comrades, this fight would not have been the same without each of you.

Dr M, thank you for always supporting me, always.

And of course, to *each participant* from the *MBBCh class of 2020*, this work would not have been possible without your honesty, words, and experiences. Thank you for sharing them with me.

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Chapter One: Introduction

Over the past fifty years there has been an intentional widening of access in higher education globally.[1] This expansion has included policy creation to 'close access gaps', targeted funding of certain population groups, increases in accredited distance learning programmes and plans to establish an estimated 150 million universities worldwide by the year 2025.[1,2] These initiatives have their focus on physical access with limited attention on symbolic components of higher education. Clark[3] describes the symbolic component of higher education, as the part that functions from an intangible space, it is rooted in culture, tradition and implicit codes, all of which shape an institution as a community.[3] Access to the symbolic component is described as a necessary process for individuals within higher education as it gives them the opportunity to develop professional identity and community belonging.[3] Access therefore has multiple aspects which go beyond the formal entry into physical spaces or the availability of knowledge, to include symbolic entry into an institution, community or group.

The term access is frequently used in scholarship; the concept however has not been explicitly theorized.[4,5] Discussion in the literature often rests on an intuitive understanding of what access implies rather than an explicit definition of it.[4-6] This study uses the definition of access from Binderkrantz, Pedersen and Beyers as a framework, and proposes the definition of access to be; when an individual or group pass a threshold controlled by relevant gatekeepers and through this entry benefit from things—including material objects, knowledge, persons and institutions. (Figure 1.1).[4,5] In teaching and learning Cele and Brandt categorize access into two parts, namely physical, and epistemological access.[7] Physical access is access to the space and resources that higher education institutions provide, it aims to ensure all those entering higher education are qualified to enter. Epistemological access refers to access to academic literacies (curriculum content and knowledge) which are needed to succeed in higher education.[7]

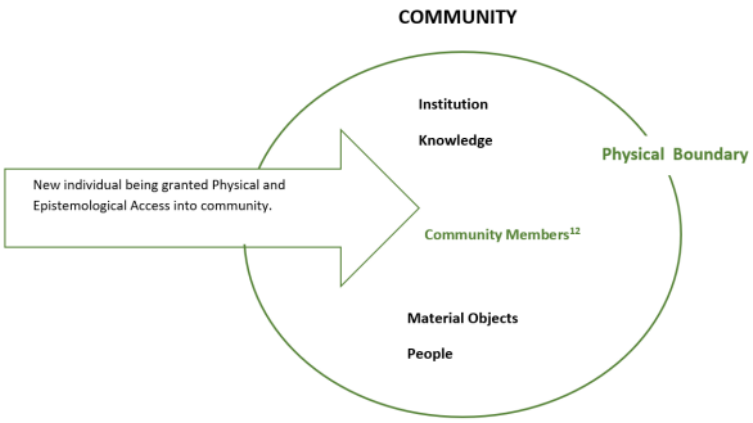

Figure 1.1: Physical and Epistemological Access

These categories do not account for access to the symbolic aspects of teaching and learning, leaving a qualitative gap for the introduction of symbolic access and its connection to teaching and learning.

Symbolic Access

Distinctions between people, groups and things create the boundaries that separate us physically and symbolically. Symbolic boundaries are the intangible but present lines that include and define some people, groups, and things while excluding others.[8] Within symbolic boundaries the culture (traditions, behaviours, discourses and values) of a community are housed, and like the physical, symbolic boundaries require access to obtain the culture.[8,9] Symbolic access is a newly emerging concept and hence its definition is developing. For the purpose of this essay, symbolic access will be defined as, *when an individual or group, gain community culture and identity through socialization by gatekeepers in the community* (Figure 1.2).[4-6,8,9] In teaching and learning symbolic access is facilitated through intentional socialization and inclusion of new individuals into the cultural systems of the institution.[10,11] Gaining symbolic access is an intangible event, it is recognised by the way the individual who has obtained it changes their expression and interaction within the community.[8,9,10-14]

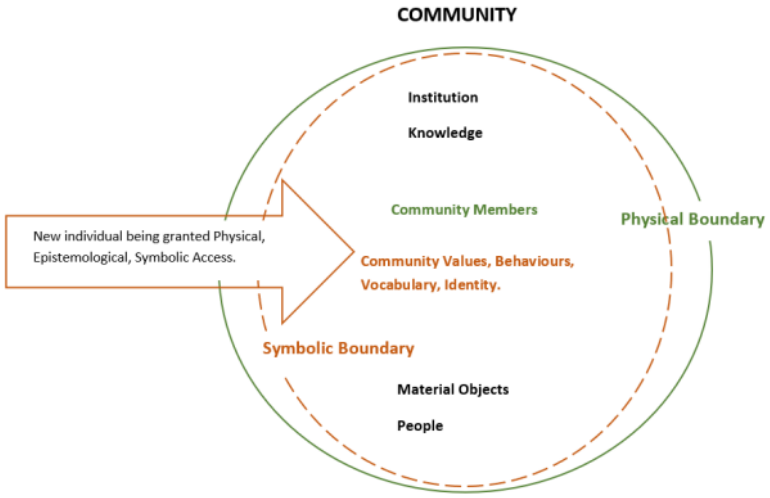

Figure 1.2 Symbolic Access

Over the years the medical community has been encouraged to not only supply students with programme admission and course-based content; but to also be cognisant of the fact that they facilitate symbolic access for the student.[15, 16] The medical community has deep rooted cultures and traditions and students admitted into medicine come eager to learn the knowledge necessary to be a healthcare worker, fostering hopes of developing their identity as a junior doctor. It is the expectation of established medical community members, to enable symbolic access for these students through intentional academic relationships and socialization. Intentional educator-student relationships and experiences may facilitate symbolic access, while negative experiences may result in alienation from the community. [17-21]

Situated Learning Theory and Symbolic Access

According to educational theorists Lave and Wenger[13] academic relationships and socialization are integral for student learning. In their theory of Situated Learning, they assert that learning is a social process, shaped by the development of relationships and socialization between newcomers (students) and old timers (educators/established community members) in a Community of Practise (CoP). They conclude that learning has occurred when a newcomer

changes their participation within the community.[13, 14] Both symbolic access and learning require community socialization and inclusion to be realized, exploring symbolic access therefore can help to explain what factors impact student learning in higher education.

Chapter Two: Literature Review

Considerable educational research is driven by the question: "What factors influence student learning in higher education?"[22-25] Commonly documented influences include student learning styles, teaching strategies, demographic background and the learning environment.[26-31] While these factors have been explored extensively there is need to focus deeper on sociocultural factors as they relate to student learning.[31,32.]

Sociocultural factors include the relationships, culture, traditions and values of a community; Bowles[33] explains that in higher education these factors fall within the umbrella of institutional culture. How students gain access to institutional culture or their awareness of it has not been described or fully investigated in the literature. [33-35] Leibowitz explains that in order for learning to successfully occur continual consideration and reflection needs to be placed on the social, cultural, and community factors that promote or restrain learning.[31] An inquiry into how students recognize and gain institutional culture, i.e., symbolic access to institutional culture, is warranted.[30,31.]

The study of symbolic access is situated in what educators call the hidden curriculum. Raso et al tells us that educator-student socialization, relationship development and student enculturation occurs in the hidden curriculum.[36] The hidden curriculum has emerged as an influential concept in medical education, as researchers realized the impact this informal teaching and learning has on the student learning experience.[37-40] Through this socially 'taught' covert curriculum, community values, norms, and attitudes are largely learnt, and these unintended socio-relational lessons may facilitate symbolic access for the student. Over the last two decades medical education has produced growing literature on the hidden curriculum, however Bandini et al highlight that there has been a lack of specificity in this research.[40,41] Lawrence et al inform us that there are multiple ways the hidden curriculum presents itself, and that it is not just a

blanketed singular curriculum. Researchers are encouraged to make explicit the details and nuances of the hidden curriculum, as being detailed will allow policymakers and curriculum developers to better identify literature related to their own needs and initiatives. Two thirds of current literature on the hidden curriculum is limited to North America, as a result the production of more contextualized studies from areas such as Africa has been strongly encouraged to adequately represent hidden curriculums in their medical school contexts.[42]

South Africa, Symbolic Access and Higher Education

The South African higher education setting is uniquely framed for the exploration of symbolic access. South Africa has a devastating socio-political history, which created a distinctly separatist higher education setting and culture.[43] Under the Apartheid regime, South Africa had five separate legislative and geographic regions resulting in the establishment of thirty-six higher education institutions controlled by eight different government departments.[44] A distinguishing feature of the apartheid higher education system was the unequal access to academic, structural, cultural and social resources in the education of different racial groups.[45, 46] As a result of these disparities one of the main priorities of the post-1994 democratically elected government was to redress the inequalities within the higher education sector, by adopting policies that would widen access to higher education for all South Africans.[47,48] This resolve was captured in the White Paper on Higher Education 1997, that promised a "transformed, democratic, non-racial and non-sexist system of higher education which promoted equity of access and fair chances of success for those seeking to realise their potential through higher education." [46]

Significant achievements regarding this access policy were realized, including an increase in the proportion of black and female students in public higher education, changes in the academic profiles of institutions, and the establishment of a national funding framework. However, the higher education mandate of the new 1994 government focused primarily on physical and epistemological access in higher education, neglecting to envision steps which would create opportunity for symbolic access in tertiary institutions.[46,49] Reddy explains that transformation in South African higher education focused on issues of student intake and throughput, as well as

the over-representation of white faculty at the expense of issues such as institutional culture and the implications thereof.[50]The journey of how students would adopt institutional culture and the process were not deeply considered. Bozalek adds that the movement in South Africa towards granting entry into higher education did not necessarily equate to student [learning] success, as this physical provision of access did not address inclusion beyond university admission.[48]

Some twenty years into democracy, the South African government was directly confronted with this symbolic oversight in what Jansen describes as, "…the most intense and violent student protests in a century of higher education", the #RhodesMustFall and #FeesMustFall movements. Two factors attributed to the 2015-2016 country-wide student protests: the alienating cultures of historically white universities, labelled #RhodesMustFall and the discriminatory cost of higher education known as #FeesMustFall movement.[51] Lange highlights that the #RhodesMustFall movement specifically brought to light the ills of cultural exclusion experienced post 1994 by the black scholar and [silent] black academic.[52]

The narrative of the ills of cultural exclusion presented itself at University of the Witwatersrand (Wits) in 2017, when final year medical students displayed a banner during their class photo stating 'Wits Med School is Racist' (Figure 2.1). This declaration was vehemently rejected and denied by the medical community in the university.[53] A more insightful response, according to Mahood would have been for the academics in the programme to address the students' perceptions of discrimination and exclusion, and further to investigate what aspects of the curriculum, programme and institution created these feelings and perceptions.[54]



Figure 2.1: Final Year Medical Students Class Photo 2017 [53]

Symbolic access to institutional culture appears to be a potent stumbling block in the South African higher education space. If left unexplored South African students will continue to struggle navigating the academic space; and will be forced to exist on the periphery of the university community. It is increasingly important for educators in higher education to be cognisant of institutional culture, the hidden curriculum and phenomenon pertaining to it. This awareness empowers educators to thoughtfully engage students and take responsibility for the role they play in symbolic processes of learning.[55-56.]

Rationale for Research

Wits medical students are exposed to various socio-relational and cultural interactions during their six yearlong medical programme. The impact these interactions have on the students' sense of community inclusion and their learning has not been formally researched or reported. This study will focus on symbolic access in the Wits medical programme, and the influence it has on learning, focusing on socio-relational interactions and community culture. Medical educationalists have argued for a shift of emphasis in the literature to include more sociocultural

factors and how they impact learning, in order to produce more socially conscious curriculum.[19,23-25.] The study of symbolic access in medical education has the potential to address this qualitative gap.

Research Question

How does symbolic access to institutional culture affect learning as a medical student?

Aim of Study

To explore final year medical students' awareness of symbolic access in Wits medical school and the impact it has on their learning.

Objectives of Study

- Explore final year medical students' awareness of symbolic access.
- Explore final year medical students' perceptions of the influence symbolic access has on their learning.

Chapter Three: Methodology and Methods

This chapter describes how the researcher systematically planned and conducted the study from philosophical thinking and research design to data gathering and analysis, ensuring the trustworthiness and ethical considerations of the research. Ultimately, the methodology and methods chapter will help to ensure valid and reliable results, that address the study aims and objectives.[57-60.]

Theoretical Framework

An interpretivist ontology guided the questions in this study. Research with this world view seeks to interpret phenomena according to the subjective frame of those who are in the world.[61] This study drew on Socioconstructivism (SC) as a theoretical framework. SC falls within the interpretivist spectrum and is a combination of Social Learning and Constructivist theories.[62,63] SC Theory proposes the collaboration of Social Learning Theory with works by Vygotsky, Bandura, and Akers and Constructivist Learning Theories as stated by Bruner and others. Socioconstructivism asserts that knowledge construction (learning) is based on an individuals' previous knowledge and experiences, coupled with their interaction with the context and culture of the environment.[62-64] This framework supported the study and its methods to discover how individuals understood and experienced symbolic access and further how they made sense of these experiences in relation to their learning.

Methodology

When choosing a methodology, the most important question a researcher needs to ask is: what type of knowledge is required to best answer the research question? [65,66] The research question of this report sought to acquire experiential knowledge of a phenomenon, within an educational context, therefore phenomenography was the methodology chosen. Phenomenography is a commonly used qualitative methodology within the social and health sciences. It was developed in response to educational research needs at Göteborgs University in Sweden.[67] As a research design, phenomenography aims to answer specific questions about thinking and learning, and it helps to describe the variation of ways that people experience the same phenomenon. In medical

education, phenomenography is used to encourage the use of varied teaching and learning interventions according to the unique experiences of the participants.[67-71.]

Study Setting

The study setting is the physical or social environment in which the research is conducted based on the study aims. For this study, the researcher aimed to investigate symbolic access in medical education and establish its influence on learning, therefore a unit for undergraduate medical education at a research-intensive university in Johannesburg, South Africa was chosen. When selecting a study setting it is important that it provides the researcher access to study participants who can give insight and relevant information on the topic being studied.[72] The selected unit coordinates the undergraduate medical degree in the School of Clinical Medicine in the Faculty of Health Sciences in the university, which provided appropriate access to study participants.

In qualitative research, it is important for the researcher to elaborate on the social context of the study setting as it adds historical and current insight to the investigation.[73] The medical school, where this study was conducted, is a historically White Anglo-Saxon influenced university, founded in 1916 by a homogenous all male, all white committee.[74] South African medical institutions are deeply rooted in cultures of educational exclusion based on race, gender, religion and class. This segregation translated to how students were taught (and by who), the hospitals they could attend, patients they had access to as well as social interactions within the institution.[75] Over the years there has been significant diversification of the institution and medical school community; the institution now consists of a community which is much more representative of the South African population at large.

At this university, the Bachelor of Medicine and Bachelor of Surgery (MBBCh) degree is 6-years long. There are two entry points into the degree: as a secondary school leaver into the first year of the programme or as a graduate into the third year as part of a Graduate Entry Medical Programme (GEMP). The Faculty of Health Sciences is adjacent to a quaternary level teaching hospital, and five kilometres from the university main campus. Students who join the degree programme from high school spend the first year on main campus. From second year onwards,

students move to the health science campus. First to fourth year students spend ninety percent of their almanac in didactic teaching, while fifth- and sixth-year students spend ninety five percent of their academic calendar in the clinical setting as they rotate between three academic hospitals for teaching in Johannesburg and Soweto.

Study Population

The study population of this project was the 2020 final year medical students (n=321) outlined in Table 3.1.

Study Population Demographics		
Race	African	38% (N=122)
	Asian	1.2 (N=4)
	Coloured	4.7% (N=15)
	Indian	21.5% (N=69)
	White	34.6% (N=111)
Age Range	20-22years old	4.1% (N=13)
	23-24 years old	62.6% (N=201)
	25-26 years old	15.9% (N=51)
	27- 28 years old	14.3% (N=46)
	>30 years old	3.1% (N=10)
Academic Performance	Top Percentile (=/> 80%-year mark)	16.5% (N=53)
	Middle Percentile (=/> 66-79% year mark)	48.6% (N= 156)
	Lower Percentile (=/> 60%-65% year mark)	34.9% (N= 112)
Gender	Female	60.7% (N=179)
	Male	39.3% (N=126)
Entry to Medicine	School Leavers	63.6% (N=204)
	Graduates	36.4% (N= 117)
Student Country of Origin	Local (South African)	96.3% (N=309)
	International	3.7% (N=12)

Table 3.1: Study Population Demographics

Study Sample Selection

Participant selection for phenomenographic studies requires the researchers to make strategic efforts to maximise diversity of participants selected, this ensures inclusive representation of

participant experiences. Purposeful sampling is typically used as a selection method in phenomenographic studies, and when appropriately done, the selected sample allows researchers to learn about the entire study population.[77] To adequately explore medical students awareness of symbolic access and its impact on their learning in this population, the researcher had to select participants who represented the diversity of the medical student demographic in this population. Participants were to be chosen based on the following pre-selection criteria, including race, gender, age, local vs international students, graduates and school leavers, top, middle and lower academically scoring students. These criteria would enable a true representation of the study population being studied.[77,78.]

Sample Size and Data Saturation

Qualitative medical education research sample sizes are usually small, with an intention of obtaining a rich in-depth description of the phenomenon of interest. The sample size of this study was 15 participants, phenomenographic studies typically suggest a sample of 10-15 participants as sufficient to capture variation and reach saturation, at which point no new information emerges from the data[79, 80.] There is no recommended upper limit currently, however sampling should ensure that the resulting amount of data remains manageable.[81]

In qualitative research there are several debates concerning sample size in relation to data saturation. Data saturation is an important concept in qualitative circles as its deemed the compass that guides the researcher about the 'right' sample size for their project.[82, 83] Although commonly used data saturation is frequently contested, multiple researchers argue that saturation is a poorly defined concept; often expressing there is no agreed method of establishing saturation.[84] Over the years the idea of sampling until data saturation is reached has been raised in several health-related disciplines. In health professions education, qualitative research scholars add to the debate by stating that, there is no consistent explanation as to how saturation has been achieved amidst the claim that saturation is reached.[84] In light of these differences, up until today, researchers seek to truly define saturation; in order to give a clear outline of when saturation is reached and provide some guidance regarding how many interviews, or focus

groups are sufficient to validate the sample size.[83,85] The chosen sample size for this project falls within the recommendation for qualitative and phenomenographic studies. The size also aligns to current medical education debates, which recognizes that saturation and sample size is still an ongoing discussion within qualitative research.

Convenience Sampling

This study was conducted in 2020, and due to the COVID-19 pandemic, academic disruption and the abrupt university closure coupled with a short time frame to invite and interview participants before graduation, convenience sampling, instead of purposeful sampling, was conducted. Convenience sampling is the most common qualitative sampling method used.[85] Participants are selected based on their availability in location, time, access, and willingness. It is a fast and a more convenient way to achieve the sample size required for a study. Following an invitation email sent to the entire class, nineteen final year students showed interest in being participants, the first 15 participants who were readily available were interviewed and became the realized sample.

Description of Realized Sample

The realized sample, depicted in Table 3.2, had an acceptable degree of diversity to provide insight into the study population.

Realized Sample Demographics (15 Participants)		
Race	African	53% (N=8)
	Asian	N/A
	Coloured	6.7% (N=1)
	Indian	6.7% (N=1)
	White	33.3% (N=5)
Age Range	20-22years old	N/A
	23-24 years old	66.7% (N=10)
	25-26 years old	13.3% (N=2)
	27- 28 years old	13.3% (N=2)
	>30 years old	6.7% (N=1)
Academic Performance	Top Percentile (=/> 80%-year mark)	26.7% (N=4)
	Middle Percentile (=/> 66-79% year mark)	60% (N=9)
	Lower Percentile (=/> 60%-65% year mark)	13.3% (N=2)
Gender	Female	60% (N=9)
	Male	40% (N=6)
Entry to Medicine	School Leavers	80% (N=12)
	Graduates	20% (N= 3)
Student Country of Origin	Local (South African)	80% (N=12)
	International	20% (N= 3)

Table 3.2: Realized Sample Demographics

Positionality and Bracketing of the Researcher

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As the primary researcher I recognize and acknowledge my fixed and subjective positionality that may influence this research study.[86] I am a 35-year-old, African, female of Ugandan-South African heritage. I am a graduate of the MBBCh programme under investigation (2011) and have lived through the process of being a medical student within the institution. I have my own 6-year lived experience of institutional culture within the medical school as a young Black female student. As a medical officer, I was recruited into the medical education space to teach in this institution because of my race, gender, alumni status and millennial relatability. I taught clinical skills to the study participants during their 3rd and 4th medical years (2017 and 2018) and over the two years have developed rapport with the students and class as a whole. Until recently I coordinated the third and fourth medical years at the medical school, and therefore have a past and present

insider stance. I draw on racial, social, educational, symbolic, theological, scientific and creativity theories to make sense of the world and am constantly conscious of my race, gender, and faith as I navigate every day.

I recognize that each aspect described influenced this research process i.e., my identity, lived experience of the university as a student and educator, engagement with the participants, theoretical beliefs, and perspective through which I viewed the research process as a novice researcher.[86,87] Deeper, I acknowledge that my positionality shapes my work and influences my interpretation, understanding, and belief in the truthfulness and validity of the participant experiences.

Data Collection

In qualitative study designs, value is placed on the depth of data collected, as opposed to the breadth; through various approaches such as in-depth interviews, focus groups or participant observations, the researcher can collect large amounts of data from a small sample.[88] In this study the researcher conducted individual in-depth interviews as per phenomenographic recommendation.[67,78] In-depth interviews are a conversational approach which seeks detailed information from a small number of participants, over a significant amount of time. This format helped to shed light on participant's thoughts, experiences, feelings and understanding of symbolic access. Facilitating the researcher to collect information regarding the phenomenon and to address the research question.

Data Collection: Tool

Hox explains that in qualitative studies the main data collection tool is the researcher, and the questions they formulate.[89] For this study, the researcher created two open-ended questions with the guidance of her supervisors and a postgraduate assessor panel (Annexure H). Open-ended questions were created because they helped the researcher to learn more about the topic, without attributing any bias or preconceived notions, leading to a discovery-oriented research

approach.[90] Whitehead highlights that qualitative research questions are often semi-structured or open-ended and thus can be 'unique' to the study.[91]

Two prompt questions were also included, again with the guidance of supervisors. These prompt questions helped to solicit further detail and depth from participants; allowing the researcher to peel back information one layer at a time.[92] All questions were assessed and revised prior to data collection, and when designing the questions, the researcher referred to the research question, aims and objectives to make sure the questions would satisfy the study.

Data Collection: Process

Pre-Interview

After receiving ethical clearance, the researcher sent an email to the administrator of the 6th year medical programme, requesting an invitation email be sent to the entire 2020 final year student body inviting them to participate in the study. This email was sent directly to individual student's email accounts and contained an introductory letter explaining the research, the ethical clearance certificate, and the participant information sheet. Potential participants were invited to contact the researcher via email or the Telegram application if they required more information about the research and/or were interested in being interviewed. Of the students who contacted the researcher, 16 were via email and 3 via Telegram. Once the researcher answered all student questions and confirmed a student wished to participate, the researcher sent each participant two consent forms: informed consent and digital audio recording consent form and requested the student sign each and return these to the researcher before the interview date and time were confirmed. For convenience, the first 15 participants to respond became the realized study sample.

When all completed consent documentation was received and filed in a secure electronic folder, two possible interview dates and times were suggested to each participant, with the additional option for the participant to inform the researcher should none of the proposed interview dates

be convenient to them; this was in order for them to come to an agreement regarding the best interview date and time for the participant.

At the start of the research process, it was anticipated that interviews would be conducted face to face, however due to strict COVID-19 lockdown regulations all interviews needed to be conducted remotely. Every participant was informed of the proposed duration of the interview (60 minutes) and asked if an online or telephonic interview was suitable; being mindful of time, data considerations, and device access. All 15 participants requested to be interviewed online via the Microsoft (MS) Teams application, as all university students had access to this online application. The researcher set up online meetings and sent the meeting link to every participant via their student email. Each participant was given a pseudonym, which was the title of their online interview link. With the link provided, participants were able to join the session via their laptop, tablet, or cell phone. Participants were given the option to switch their camera on or not, depending on internet bandwidth and comfortability. Online interviews were conducted from 29th April to 08th September 2020.

The researcher had minimally practised her interview skill prior to this project, she conducted three interviews of senior colleagues within the university, which were audio recorded for a master's degree assignment. Donalek explains the importance of the novice interviewer practising their interview technique repeatedly under supervision in order to become more comfortable and to become attuned to themes which may emerge during the process.[93] As a novice interviewer the researcher sought guidance from her supervisors and shared early interview recordings with them for feedback regarding interview technique.

The Interviews

At the start of each interview the researcher introduced herself, briefly explained the interview process and what would occur, participants were given the opportunity to ask additional questions before the start of the interview and due to the sensitivity of the topic were again informed that anonymity would be maintained. Additionally, participants were told that they had the right to omit answering certain questions and could withdraw from the interview at any time without consequence, should they feel uncomfortable or unable to continue. Participants were

informed when the interview recording started and that a copy of the interview recording would be available to them on request. The researcher started each interview with the following 'icebreaker' question "Why did you choose to study medicine?". This question aimed to set the participant at ease and establish basic rapport, after this question the researcher asked the study questions. During the conversation the researcher took notes as participants spoke and asked questions based on what was expressed by the participants, the researcher also continually encouraged participants to elaborate or expand on meanings and thoughts expressed.

During and after each interview the researcher took notes of how best to conduct future interviews; from the introduction to the way questions were asked; utilizing these noted techniques in subsequent interviews. After each interview, the researcher started to learn better interview techniques i.e., to listen instead of lead, discover rather than direct, and during discussions with her supervisor, determined better ways to conduct subsequent interviews.

Post-Interview

Every interview was recorded via MS Teams by the researcher, interviews were then downloaded and saved in a password protected electronic file on the researcher's laptop. The researcher shared the interview recordings with her supervisors by creating a password protected MS Streams group, which allowed them to listen to the interview recordings. Phenomenographic interviews are typically recorded and transcribed verbatim for subsequent analysis. All 15 interviews were transcribed verbatim from audio recordings, and all transcriptions were saved in a password protected electronic Word file. Participants were given the opportunity to review the final recording and transcript as a true reflection of the interview, none requested a review. Transcripts were reviewed while listening to interview audio recordings, this helped the researcher get a general overview of the interviews and functioned as the start of the data analysis process.

Establishing Trustworthiness in Phenomenographic Research

In the research process, it is important to establish the credibility of findings presented. It is suggested that researchers answer the following questions to determine research rigour; (1) how did the researcher establish that findings presented are genuine?, (2) how can we determine the applicability of the findings in other settings/with other responders?, (3) how can we know if the same findings would be repeated with similar participants in the same context?, and (4) how can we determine if the findings come solely from participants and are not influenced by the researchers?[94] Qualitative research approaches are diverse, consisting of a variety of philosophical paradigms and therefore requiring different criteria for answering the four questions mentioned . Lincoln and Guba proposed that for qualitative research trustworthiness can be established by the following four criteria Credibility (internal validity), Transferability (external validity), Dependability (reliability) and Confirmability (objectivity).[94] These four criteria were used for this phenomenographic study.

Credibility

Credibility is the confidence that can be placed in the truth of the research findings, confirming whether or not the research findings represent acceptable information drawn from the participants' original data and is a correct interpretation of their original views.[94] In this project strategies used by the researcher to establish credibility included practising her interview technique with supervisor checks, clarifying researcher bias by declaring and accepting her positionality relating to the study context and keeping a field journal to demonstrate her conceptual lens and introspection during the research process. The journal helped the researcher to reflect on comments and experiences mentioned by the participants, introspect on her own experience of the same context and understand her connection and need for intentional separation from the study participants. Taking personal notes assisted with future interviews and validated her own lived experience.

Transferability

Transferability refers to the degree to which the results of qualitative research can be transferred to other contexts with other respondents i.e., generalizability for the interpretivist.[94,95] Transferability has been ensured by providing a clear context of the country, its socio-political and higher education history, clear context of the medical school, its medical programme and in-depth class demographic of those who were invited to participate as well as the realized study sample. These detailed descriptions will help other researchers to make a judgement about the findings fitting in with their contexts and further to replicate the study with similar conditions in their settings.

Dependability

Dependability is important as it determines whether the findings of a study can be consistently repeated, if the inquiry is to be replicated with the same or similar respondents in the same or similar context. Dependability is established by clear stepwise documentation of the research process, auditing, coding, and re-coding during the research process.[94,95] This research study had detailed coverage of the methodology and methods used, allowing the reader to assess the extent to which appropriate research practices have been used and followed. This detail included outlines of the study design, its appropriateness and implementation, in-depth details of data collection and methods utilized, along with clear field and journal notes.

Confirmability

Confirmability is the degree to which the results of a study can be confirmed by other researchers, which helps to establish that the data and interpretations of the findings are solely from participants and not based on the primary researchers' biases, interests, and perspectives.[94,95] During this study there were consistent weekly consultation with the study supervisors to discuss findings, develop phenomenographic categories and variations.

Ethical Considerations

The protection of research participants through the application of appropriate ethical principles is important in research.[96] The responsibility of ensuring that this research project was conducted

ethically lay with the researcher, who under the guidance of supervisors, made sure that all phases of the study were carried out in an ethical manner, especially abiding to ethical principles when choosing potential research participants. Mohd Arifin suggests five ethical issues that must be considered in research namely, Informed Consent and Voluntary Participation, Anonymity and Confidentiality, the Interview session, Data Analysis and Dissemination of Findings and Data Protection.[96] The first step being establishing ethical approval to conduct the study, the following permissions were obtained to conduct this research.

Ethical Permission Requested and Obtained:

Permissions to conduct the study were requested and obtained from:

- The Postgraduate Assessors Committee Researcher Assessors Panel 30th September 2019. (Annexure A)
- Head of School of Clinical Medicine, Prof Daynia Ballot, as the study cohort (final year medical students) belong to the School of Clinical Medicine in the Faculty of Health Sciences, 1st October 2019. This allowed the researcher to obtain demographic data of the study cohort. (Annexure B)
- The University of the Witwatersrand Human Research Ethics Committee (HREC) Medical on 12 March 2020. Unconditional Approval. (Annexure C)
- The University of the Witwatersrand Deputy Registrar, Mrs. Nicoleen Potgieter on 11th February 2020. This allowed the researcher to conducted research on university premises, and/or involving staff and/or students at the University as research participants. (Annexure D)

Informed Consent and Voluntary Participation

In ethically considered research, consent is voluntary (freely given). Participants understand what is being asked of them and must be competent to give consent. It is important that participants are fully informed about the study and have the power of freedom of choice to allow them to decide whether to participate or not.[96] All potential participants were sent an email informing them of the purpose of the study with the contact details of the researcher (email and Telegram)

should they choose to participate. The email contained the participant information sheet with full details about the research study. When contacted the researcher gave time for potential participants to ask questions so she could address any concerns. After which she electronically provided every potential participant with two consent forms to complete: written informed consent and digital recording consent forms. The researcher requested that the participant read the forms, then sign them, and send back both forms, indicating their permission to be part of the study, before she suggested potential interview dates. This turnaround time was typically four days.

Anonymity and Confidentiality

Anonymity and confidentiality of the participants was established by giving each participant pseudonyms in place of their own names, and by not revealing their names or any form of identifier in the data collection, analysis, and reporting of the study findings. Privacy and confidentiality of the interview environment were managed during and after the online interview session, data analysis and dissemination of the findings. Further, in the participant information sheet, participants were requested not to discuss the interview with peers.

Interviews and Beneficence

During the interview process, it was important to ensure the well-being of the participant, who also had a right to protection from discomfort and harm elicited by the interview session. Each interview was set up via a private meeting link by the researcher, emailed directly to the participant, which they could use to join the one-on-one interview meeting. The researcher is the only one who can match the identity of the participants and voice recordings. It was explained that as their participation was voluntary, withdrawing from the study at any point would not affect their academic marks, clinical rotations, or any aspect of their degree. Additionally, they could choose not to answer questions should the question cause discomfort. Due to the sensitivity of the study, contact details for counselling services were made available to participants. Counsellors are available free of charge via the Faculty Office of Student Success. Participants were also encouraged to ask the researcher any questions during or after, about the

research. If participants had any concerns or complaints regarding the ethical procedures of the study, they were provided the details of the Chairperson and Senior Administrator of the HREC (Medical) Committee to contact.

Data Analysis and Dissemination of Findings

Identities of the participants were removed during data transcription, including their names and/or any significant identifiers. Participants were always referred to by their pseudonym names in the transcript or verbatim quotes. All consent forms or any document which contains the participants' personal detail was kept in a password protected electronic file solely accessible by the researcher. Participants were however, notified that their demographic data would be used for the purpose of reporting the data from the interview. Data was shared with two qualitative researchers, the researchers' supervisors, for the purpose of reaching agreement of the interpretation without exposing the participants' details at any stage. The access of the supervisors to the data was explained to participants and consent regarding this matter was obtained.

Data Protection

Some data analysis was conducted simultaneously with the data collection and transcription process. The data was privately shared with two qualitative researchers via a secured Microsoft Streams group. Data was stored in an electronic folder which is password protected, with the password only known by the researcher. Hard copies or written materials of the data were kept in a secured cabinet in a locked room with no access to others to ensure adherence to legal requirements and ethical guidelines. Written and electronic data from this study will be stored for five years. However, the interview recordings will be disposed once they are no longer needed. The researcher was aware that any unexpected adverse event which was caused by this study should be reported to the HREC (Medical), however, no such event occurred throughout the study period. The results of the study will be reported and disseminated through a research report, peer reviewed scientific journals, conference presentations, and the online university

library. All anonymised data will be securely stored for a period of ten years in accordance with the University of the Witwatersrand guidelines.

Study Limitations

This study was conducted in one medical school setting, making the findings contextual, however the findings linked with literature from other settings. There was scarcity of prior research on the phenomenon under investigation, which warranted the investigation but also meant there was minimal literature to support and elaborate on the phenomenon. The study methodology chosen, phenomenography, was labour and time intensive. The study sample could not be purposively selected, however convenience sampling resulted in the appropriately diverse sample. Although the sample size was within acceptable limits for phenomenographic study a larger sample size may have added more variation of phenomenon experiences.

While categories were based on words of the participants, the researcher confirms that the interpretation of these words was influenced by the philosophies and interests of the researcher, as the researcher undertook the study due to her interest in the topic. The involvement of the researchers meant that data could not interpret itself or be completely without the bias of the researchers, who developed the categories of description. Readers and researchers are therefore open to scrutinize the categories based on the data given and arrive at a different interpretation.

However, research is a mutual space, shaped by both researcher and participants, hence both identities have the potential to influence the entire research process.[87] While researcher interpretations were used when analysing the data only interpretations supported by the data were retained. Marton suggested that the categories of description relate the participants as a collective rather than individuals[78] therefore it can be argued that this collective includes the researchers as they conceptualised the research, participated and shaped the interview and the data. While the researchers voice is not explicit in participant transcripts, the researchers do influence the participants' voice.

Chapter Four: Data Analysis

The main aim of phenomenographic data analysis is to identify a set of qualitatively different ways in which a group of people understand a phenomenon, these are called Categories of Description.[97] The first steps of phenomenographic analysis are similar to those of a thematic inductive analysis, the raw data is analysed, using a constant comparative method, and codes or variations are determined. After initial coding, a comparison of codes' similarities and differences is done, and the end result is the emergence of specific Categories of Descriptions (CoD) and Dimensions of Variation (DoV). The CoD's demonstrate different ways the phenomenon is understood and the (DoV) are the different ways the categories of descriptions are experienced (Figure 4.1).[98] In phenomenography emphasis is placed on searching for the collective meaning rather than describing each individual's experience, hence CoD's are created.As a final step all categories and variations are integrated in what is called the Outcome Space, this is a visual representation showing the variation of understanding the phenomenon in question at the collective level.[99]

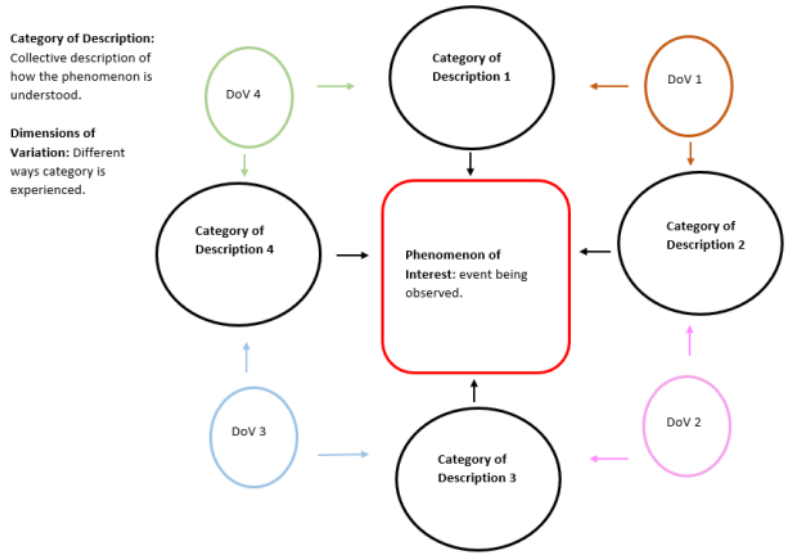

Figure 4.1: Categories of description and Dimensions of variation in relation to phenomenon.

Method of Data Analysis

Various phenomenographic analytical methods exist, this study used Dahlgren and Fallsberg's seven step process for phenomenographic data analysis for two reasons: first, these seven steps are easy to understand for the novice researcher and second, the steps do not conflict with the other available processes. [98,100,101] The steps are as follows: 1. Familiarization, 2. Condensation, 3. Comparison, 4. Grouping, 5. Articulating, 6. Labelling, and 7. Contrasting.[98]

Step 1 Familiarization: The researcher printed and read all transcripts repeatedly while simultaneously listening to the audio recordings, in order to familiarize herself with the data. Notes and sections of each interview were manually highlighted. The researcher immersed herself in the data to ensure in-depth understanding of the text and to get accuracy of context.

Step 2 Condensation: Relevant recurring feelings, words, and experiences participants used were identified, grouped together and recorded as patterns. This was done in order to uncover repeated patterns or similarities in the data.

Step 3 Comparison: Researcher studied and discussed patterns with supervisors in order to identify similarities and differences in the patterns.

Step 4 Grouping: Patterns were sorted into initial Categories of Description according to the similarities of their essence and how the categories described the participant's experience of the phenomenon - symbolic access.

Step 5 Articulating: Categories were read and discussed between researcher and supervisors to identify the essence of each category. The main aim of this step is to set up boundaries among the categories.

Step 6 Labelling: After confirming the categories, the next step was to distinguish features between them, these become the Dimensions of Variation, and label them accordingly.

Step 7 Contrasting: Discussion and reviewing of categories of descriptions were held between the researcher and supervisor. Categories were contrasted and thoroughly defined in order to be clearly distinguished and arrive at the four categories in this study.

The process of articulation, labelling and contrasting (step 5-7) was iterative, which is true to the nature of phenomenographic data analysis. The end goal was to define categories which best represented the qualitative variations of the phenomenon from the participants' responses.

Results

Phenomenographic analysis results can be presented in three steps, first an introduction to the CoD's, followed by an introduction to the DoV's, and last the presentation of the Outcome Space, which is a visual representation of the intersection between the CoD's and DoV's.

Categories of Description

Four Categories of Description were identified during the seven-step process of data analysis. Each CoD demonstrated different ways the phenomenon was understood or experienced by the participants. The four Categories of Description are 1: Rejection, Category 2: Disregard, Category 3: Alienation, and Category 4: Actualization. Categories do not represent individual participants' perception, instead they capture the collectives richness of the experience.[103] Åkerlind highlights that in phenomenography it is impossible for one quotation to illustrate all aspects of the category described, but one appropriate quote can be selected which emphasizes the differences between categories, more than their commonalities.[104] This study used a minimum of one and maximum of two quotes to emphasize difference.

Category of Description 1: Rejection

In this category, participants experienced not being accepted within the medical community. This was experienced during the first four years of the programme by physical isolation from the community and negative interactions between educators and students. Experiences of rejection occurred consistently during the pre-clinical years; and during the clinical years, these experiences varied in intensity. Interview data showed that students who joined the programme in 1st year as school leavers as well as those who joined in 3rd year as graduates expressed similar rejection from the medical community.

"The one doctor said she never signed an agreement to teach students. And she said that blatantly in our face, and we're like, were you never once a student?"
Participant GECG15

"The one doctor went so far as to question, she was basically, like, I don't know why the university allows this whole graduate entry thing...and then in my mind, I'm just like, you're basically questioning why I'm here."
Participant SBG12

Category of Description 2: Disregard

The experience of being ignored, neglected or unseen in the community formed the second category. Disregard was described due to varying events, from poor educator efforts during the pre-clinical years to a complete lack of recognition from clinical educators during the clinical years.

"To me it seemed like it was an additional duty of the clinician to deliver a lecture, but not necessarily a primary duty, or seen as a primary thing to be accomplished – or an important thing to be accomplished. More as a side thing"
Participant SWB8

"Many times, a consultant would come do the ward round with everyone there, no hello to us or anything, then once the round is over, they leave, without even recognizing we [students] are there. And that's it".
Participant SBB14

Category of Description 3: Alienation

Isolation and alienation from the community was pronounced during the pre-clinical years. This occurred in two ways: 1. physically, students were relegated to lecture theatres for didactic lectures for 95% of their teaching calendar, and 2. socially, students had minimal engagement with the medical community at large. During the clinical years, isolation was experienced as the lack of support from educators.

"For me to be honest, Medical School is just not welcoming or friendly. During the pre-clinical years, you're basically sitting in lecture theatres all day, then the clinical years are two years of feeling unwanted".
Participant SWG1

There was always a lack of support until now. There's always been this lacking… With each year, it might be in a different form but there's always a lack of support.
Participant SBG9

Category of Description 4: Actualization

This category expresses experiences of inclusion and understanding; four main events contributed to this: 1. relationships with peers, 2. clinical skills teachings during the pre-clinical years (3rd and 4th year), 3. Clinical participation, and 4. positive relational encounters during the clinical years.

Relationships with Peers

"… I always said that going to lectures and listening to a lecturer with your classmates is sort of like thinking, hey guys, we're in this together."

Participant SBB14

Clinical Skills Lessons Experiences

"And then, in 3rd and 4th year with clinical skills, I felt like the teaching was good and educators were very nice people. Very nice. They understood students, what students need, you know. So, I think clinical skills in 3rd and 4th year, we had good educators."
Participant SBG4

Because I felt like they [clinical skills educators] were younger and they understood [us], I felt like they were very empathetic and understanding, or understood what students go through. They would make that extra effort."
Participant SWG1

Participation during clinical years.

"And then I did student internship. I thought that was really cool. I really enjoyed internship. I think the nice part of that was that for once there wasn't such a focus on bedside tutorials and I was working with the team".
Participant SBB4

"It was very nice to be in the hospitals, to actually manage the patients, see the conditions that you've heard the theory about."
Participant SBB7

Positive educator encounters during the clinical years.

"In the actual hospitals I had some good experiences, Like in Obstetrics, I had a doctor – he was so nurturing…Even in the ward round, he made us a part of the team."
Participant GECG15

"…you also have really, really good doctors who are always willing to teach, who are always willing to listen to students' concerns, who look out for students, you know, who take students' interests to heart."
Participant SBG3

Dimensions of Variation

In phenomenography CoD was experienced through what is called the Dimensions of Variation, these variations are primarily determined through step 6 of the data analysis process. DoV's are a collective of similar events found in the data that illustrate the various ways a CoD was experienced. The five DoV's of this study were: 1. Interactions with Educators, 2. Relationships with Peers, 3. The Educational Environment, 4. Race and 5. Hierarchy.

The Outcome Space

The outcome space in phenomenography is a visual representation of the way the phenomenon was experienced by the collective. Three types of recommended outcome spaces exist: hierarchal inclusive, with categories presented in taxonomy format, climatic, in which categories are arranged according to the level of the explanatory power, and chronological, which represents the development of the participants' experience of the phenomenon.[97-98] The outcome space in this study will be presented using the chronological order (Figure 4.2). This method was chosen in order to show the development of how participants experienced symbolic access. Initially, participants expressed limited experience of symbolic access but as the participants develop relationships with peers, attend clinical skills lessons and progress to the clinical years, there is growing perception of the phenomenon. It can be represented in various formats: diagrams, tables, or figures.[98] This study has chosen the table format (Figure 4.3). The discussion chapter unpacks the outcome space in more detail.

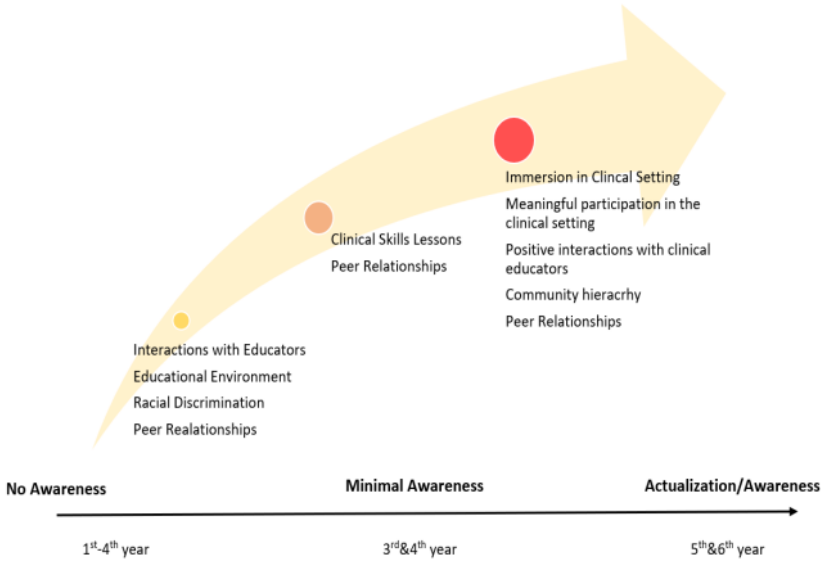

Figure 4.2: Chronological Outcome Space

OUTCOME SPACE					
Category of Description:	**Dimensions of Variation**				
	Interactions with Educators	**Relationship with Peers**	**Educational Environment**	**Race**	**Hierarchy**
Rejection	**No initiation** by educators to develop educator-student relationships.		1st-4th year: Students **not welcomed** by medical community. 5th&6th year: Feelings of **illegitimacy** in the community by students.	**Exclusion** and **poor community identification** by SoC.	
Disregarded	1st-4th year: Students **not recognized** by community. Clinical Years: Students **ignored** during significant community events.		1st year: Students **completely ignored** by medical community. 2nd-4th year: Students on medical campus but **not prioritized**. 5th&6th year: stressful often with **little support** from educators.	**Neglect** and **othering** of SoC based on race.	Clinical setting of medical community extremely hierarchal, medical student always **at the end of the queue**.
Alienation	Significant **isolation** during early years of the programme.		1st- 4th year: Students **separated** from the medical community in lecture theatres.	Sense of **estrangement** from the community.	
Actualization	3rd and 4th year: Clinical Skills educators source of community **acceptance.** 5th&6th year: **Recognition** and **prioritization** close to graduation.	Facilitated a sense of **community** and **identity development**. Students **'seen'** by peers. **Source of comfort** and **guide** for students to navigate the academic and clinical space.	3rd and 4th year: Clinical Skills lessons opportunity to learn skills to be used in future. **Safe environment.** 5th&6th year: Opportunity to **meaningfully participate**.	Positive experiences of **encouragement** by seniors of same race.	Hierarchy a **rite of passage** into medical community.

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Figure 4.3: Tabular Outcome Space

Chapter Five: Discussion

Introduction

The discussion chapter brings 'life' to the study, it expresses the meaning of the data and findings, highlighting their importance and contribution to the particular field of study.[105,106] This discussion chapter is divided into three parts; Part I: The Outcome Space, what does the data mean? Part II: Students' awareness of Symbolic Access: Do you feel like you're part of the team? and Part III: Does symbolic access impact learning? This discussion aims to describe what was found in the outcome space, connecting it to the research aim and objectives.

Part I: The Outcome Space, what does the data mean?

Form the outcome space we see two 'experience narratives' described by the students. The first major narrative is of exclusion, this was defined as rejection, disregard and alienation and formed three of the four categories of description. These three categories were perceived through interactions with educators, the educational environment and racism, which accounted for three of the five dimensions of variation. The second minor narrative from the outcome space was of inclusion defined as actualization- the remaining category of description. Inclusion was informed by the remaining two dimensions of variation; peer relationships and hierarchy, and two sub-variations clinical skills lessons, clinical participation. The following paragraphs will expand in detail on how exclusion and inclusion were perceived, by merging the categories of description and dimensions of variation.

Exclusion

Interactions with Educators

During earlier years of the programme, 1st-4th year, educators and students engaged in what the researcher calls a 'transactional relationship'. This transaction consisted of educators delivering knowledge to the students, who in turn transacted this knowledge back to the lecturers in exams. A large majority of the pre-clinical years constituted this kind of interaction and resulted in poor socialization of the students into the medical community. Although students had the title of medical student, it did not translate to their lived experience. Instead of developing a sense of

community identity, students expressed feeling like 'general university students'. These relational experiences are consistent with the literature regarding early medical years. Lempp describes these years as cocoon-like, where students exist apart from the community and have very limited opportunity to bond with their educators.[75] The impact of isolated pre-clinical years on the medical student is an inadequate sense of community identity and, belonging largely rooted in their ability to transact information successfully.

The relational experience in the clinical years 5th and 6th year, was largely defined as erratic and unstable, although participants did express experiences of recognition and inclusion, these were sporadic. Senior clinical educators were often described as a distant group, who functioned in an environment of hierarchy. In the clinical setting students struggled to develop relationships with seniors, as consistent interactions were occasional and rarely went beyond scheduled one hour bedside tutorials. Further, students described disregard from their seniors during important community gatherings like grand ward rounds. A large amount of the medical students' time was spent with less senior community members i.e., medical officers, or interns whose main objective was service delivery and not student teaching or socialization. As described from the interviews, a strong sense of rejection and inadequacy developed in the students during the clinical years. Stark explains that the fragmented student-educator relationship found in the clinical setting is common, there are examples of high quality and inspirational interactions alongside deep humiliation and being made to feel unvalued.[107]

The development of the educator-student relationships and the subsequent socialization that occurs is fundamental for the new university student as it serves as the bridge for the newcomer into the community. Medicine cannot be learned without relationships, and curricula that ignore or take them for granted do so at their students' peril. [108] Worley argues that during the initial years of a university programme, the onus to structure, initiate and encourage academic relationships lies exclusively in the educator's court, as they have the responsibility of creating the overt curriculum, and should be cognisant of the hidden curriculum.[108] Lyon adds that established community members should have a clear and well-articulated view of the medical

student's role in the community, intentionally designing curriculum and opportunities that provide accessible relationship platforms for the student.[109, 110]

Educational Environment

Alienation from the community was described across two educational environments, the physical environment and the educational climate.[111,112] Students' experience of the physical environment mirrored their relational experience with educators, i.e., it was remote and disconnected. The entire first year of the programme is situated off medical school campus, and the impact of this physical distance came across strongly as the students described their struggle to identify and associate with the medical community and programme in the early years of the degree. This disconnect continued in subsequent years, 2nd-4th year, where students were again isolated from the medical community, spending a large amount of their time in didactic lectures, often in the same lecture theatre for an entire year. There was an expression of deep disappointment by these aspiring doctors to be, who found themselves confined to university spaces, while longing to be in clinical settings.

The outdated medical school building and infrastructure, which has remained unchanged for some 40+ years added to the feelings of neglect and isolation students felt, learners wondered why they were not deemed important enough for the community to create inspiring learning spaces. Nordquist states that the physical educational environment in higher education is a concern globally, explaining the scary realization that development of physical-learning spaces in higher education essentially stopped some 150 years ago.[113, 114] Very little effort is made on the part of medical faculties to create stimulating and appropriate learning environments for the medical student, who must self-negotiate theses lifeless spaces together with experiences of seperateness.[113,114]

The educational climate described was primarily of the clinical years and had two descriptions: immense pressure and anxiety. Students experienced stress due to the sudden increased workload and multiple new emotional challenges. The complexity of these experiences were

coupled with poor support from clinical educators which left the student feeling alone and vulnerable. These experiences are in keeping with explanations of the clinical setting that Kennedy et al describes as ruthless, autonomous, and stressful; newcomers must be aware that not only must they demonstrate their academic ability, but that this goes hand in hand with the ability to work in an environment which contains literal life or death pressures.[115] Shacklady and Ahmed confirm that the transition from pre-clinical to the full-on clinical environment increases anxiety levels, with students having to deal with multiple new 'hits' at once, these factors generate high emotions, which are mostly negative.[116,117] The complexity of this environment often leaves students feeling combinations of fear, anxiety and confusion.

Race

Experiences of discrimination based on race uniquely moulded the Student of Colours' (SoC) time in medical school, descriptions of race-based community exclusion were repeated narratives by the SoC. Social and academic alienation were described, as well as feelings of disconnect from the community culture. SoC's told stories of favouritism towards certain race groups during teaching sessions, ward rounds and in examinations, academic alienation, as well as feelings of being othered within the community. Participants expressed that few role models looked like them, which made mentoring and a sense of relatability difficult in the community. SoC's described two exclusionary 'hits', the first general exclusion of the newcomer in community and second exclusion based on race which was specific to the SoC. Beagan found that medical schools are spaces where exclusion based on race is frequently described, students from racialised groups often describe mundane daily community practices which intentionally or unintentionally, other, exclude or alienate them.[118] The SoC interview data in this study adds to existing global and local literature regarding everyday racism in medical education.[118-123.]

It is important to note that White participants did not discuss experiences based on race. Beagan explains this by stating that SoC's often highlight their experience of racial exclusion for two reasons; it is their lived reality and the SoC is made acutely aware of their difference every day in the community. [118] Literature highlights that most medical school culture caters largely for the White student, who more easily assimilates into its community and way of being.[118-120] Despite

its importance, there has been a noticeable lack of attention on how institutional racism is perpetuated by medical schools. Racist experiences are brushed off, culture remains and the profile of faculty members, particularly at senior levels, remains dominated by white staff, particularly men.[118-121.]

According to Lim, Baldwin, Wolf and Mavis these exclusionary experiences are not uncommon in medical education and are documented in literature globally, the culture of student rejection is ingrained in medical education, with recurring student stories of humiliation, dehumanization, and alienation from the medical community. [124-127] This consistent negative experience is ironic, as the same clinical educators who display thoughtfulness and acceptance towards their patients, are found rejecting their own.

Inclusion

Three experiences contributed to feelings of community inclusion: 1. Peer relationships, 2. Clinical skills teaching, and 3. Meaningful participation in the clinical setting. Peer relationships between student contemporaries and between senior and junior students was a consistent source of community inclusion for students. These relationships functioned as encouraging and affirming bonds and strong support systems, both academically and socially. Through these intra-communities students were able to establish some feeling of legitimacy and belonging within the greater community. Due to the shared common identity, students expressed that trustworthiness between them was easily established; junior students were ready to listen and participate when seniors shared knowledge of how to navigate faculty members' expectations; and senior students were quick to share personal strategies of how to become successful academically and socially in the community.

Additional data found that peer relationships could be marginally determinantal to students' success, as participants described peer cliques based on race or religion in which academic resources were exclusively shared, leaving others out. This was a minor but noteworthy finding as it helped paint a comprehensive picture of peer relationships. Despite this peer relationships

were found to be positive and added to feelings of inclusion, affirmation, and acceptance for the student.

Clinical skills teaching sessions were unanimously described as a positive experience. During these simulated lessons students had remarkable educational development as well as deeply positive community socialization. Meaningful community traditions like wearing scrubs, using medical equipment and performing clinical examinations were conducted during these lessons, thus creating the platform for students to develop a sense of community identity. This educational experience was coupled with positive community socialization with a consistent group of young clinical educators who taught the students, in small groups, every two weeks for two years, and who managed to create an encouraging, safe and inclusive teaching environment. Students described educators as relatable, caring, and saw them as mentors as well as peers.

In light of the deeply exclusionary and partly inclusionary picture of the outcome space, the researcher circled back to the foci of the study and reflected on what the findings of the outcome space meant in relation to students' awareness of symbolic access and its influence on learning. Part II will focus on the relation of the findings to the research question, aim and objectives.

Part II: Students' awareness of Symbolic Access: Do you feel like you're part of the team?

In light of the outcome space's double narrative, deeply exclusionary experiences (major) and tangible inclusionary experiences (minor) the researcher sought to find out what this description meant for students' awareness of symbolic access. Reflecting on and re-reading the interviews revealed that participants expressed an overall awareness of having attained symbolic access through descriptions of being part of the 'team', understanding their role in community and finally being 'seen' by their seniors during the final year of the programme.

Researcher: Do you feel like you're part of the team? [medical community]

[Chuckling] "For the most part yes, I do."
Participant GEWB5

"Yes, in final year, in 5th year, they [seniors] aren't really checking for you, but…final year, they really do make you feel like part of the team; well, in every rotation I've been in so far… "
Participant SBG10

"I generally do. Like I understand what the job of an intern is. I understand it."
Participant SBG3

Participants awareness of symbolic access was represented by their ability to identify with the community and its culture. This awareness of symbolic access despite deeply exclusionary experiences was intriguing prompting the researchers to reflect on what informs overall inclusion amidst overwhelming exclusion. Weaver et al, Baernstein et al, Goldie et al and Pitkala and Mantyranta, assert that the main factors which contribute towards medical students' sense of community belonging and professional identity include 1. Doing the work of the doctors, 2. Increased patient interaction, 3. Time spent in the hospital, 4. Being treated as healthcare workers, 5. Increased responsibility, and 6. Seeing their role models in action in the workplace.[128-131] In their educational theory, Situated Learning, Lave and Wenger theorize that within the medical setting the experience of community immersion and participation facilitates the development of community identity and belonging.[132] These authors explain that in a Community of Practise (CoP) newcomer participation and the learning of community attributes such as vocabulary, skill, knowledge, and responsibility facilitate the newcomers progress from what they call a Legitimate Peripheral Participant (LPP), into a community member (Figure 5.1). They add that an important and concluding aspect of full participation in a CoP is the acquisition of the identity associated with the community.[13,14,132]

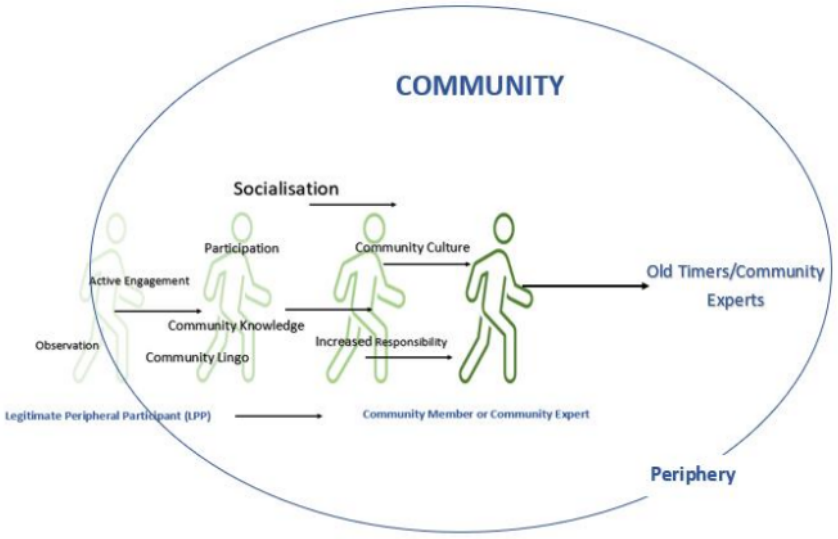

Figure 5.1: Progression of legitimate peripheral participant in community of practise

Reflecting on the interview data, seven experiences contributed towards students overall awareness of symbolic access amidst deeply exclusionary experiences. These experiences, which will be discussed below, were crucial for symbolic access as they outweighed the ubiquitous negative experiences students described.

1. Peer relationships, Eberle describes peer relationships in medical education as a community of practise (CoP) within a CoP, explaining that through such essential relationships newcomers acquire vital knowledge of community culture and how to participate in the CoP in a meaningful way.[132] 2.Clinical Skills lessons and educator relationships, through clinical skills lessons students gained their first experience of community participation, this coupled with positive educator engagements, facilitated the early stages of their identity development, demonstrating access.

3.Clinical immersion (being in the hospital) and receiving bed side teaching made the students feel like they were part of the medical experience. Participants associated the clinical environment with 'real medicine'. 4.Managing patients, being entrusted by established community members to manage patients boosted participant's self-confidence and sense of

legitimacy in the community. 5.Performing clinical skills in the hospital setting with the opportunity to transfer simulated skills to real life skills on patients validated legitimacy and helped to develop their identity within the community. 6.Working with future colleagues in the professional and learning from established community members in the clinical setting was cardinal to participants' feelings of inclusion. These feelings were further solidified and developed when participants had positive engagements with clinical educators. 7.The experience of community hierarchy, which will be explored and discussed in detail below.

Hierarchy as inclusion?

While all other 'inclusion events' could be simply explained, the experience of hierarchy as an inclusion event warranted deeper unpacking. The culture of hierarchy is a well-documented feature of medical communities and much more evident in the clinical training environment[133,134] Upon entering the medical community, medical students typically find themselves at the very bottom of a long, steep, and established hierarchy[109,110] Hierarchy was described as an accepted form of initiation, that every medical student experiences in order to be deemed "tough enough to do medicine". It was seen as an event necessary to acquiring community inclusion.

"…I think the suffering [laughing]…It makes you feel part of the team, too."
Participant SBG10

"We all go through it [hierarchy] …*We all have to go through it*, of course, but it's not always easy."
Participant SWG1

Hierarchy was continually described in a negative light; however, participants described the necessity of hierarchy, expressing that this form as a rite of passage. For the medical student, the development of community identity is as a result of multiple events that are considered rites of passage in the community, these range from cadaver dissections to the wearing of white coat or the loss of one's first patient.[135-142] The experience of hierarchy functioned as a rite of passage for the participants and contributed, indirectly, to their feeling of inclusion into the community and evolution from student to junior doctor and intern. Vanstone and Grierson list positive effects hierarchy has in medical education describing that it helps to create a social framework for the student who can establish awareness of 'their place' in the community.[133, 134] Although

the literature explains the events which lead to community inclusion, it lacks exploring whether the essence of these events are negative or positive. Further research into this phenomenon is warranted, but will not be explored for the scope of this study.

Medical students articulate an awareness of symbolic access in the community, this awareness is facilitated through noteworthy events and experiences during the pre-clinical and clinical years such as clinical skills lessons, peer relationships, clinical immersion and participating meaningfully in the clinical setting. While strong negative events are experienced, these do not deter the awareness of symbolic access and can ironically contribute towards the awareness of it.

Part III: Does symbolic access impact learning?

After establishing students' awareness of symbolic access, the next aspect of this study explored participants' perception of how symbolic access impacted their learning. Discussions about learning varied, during the pre-clinical years teaching was mass delivered didactically to classes of 300+ students, leaving little room for interactive and engaging learning opportunities. This coupled with poor educator-student interactions during the pre-clinical years resulted in a learning experience regarded as cognitive overload, a waste of time and isolated.

"…I think in the earlier years I think it was more of self-study… [there was] not much interaction with lecturers".
Participant SWG1

"…the people [educators in pre-clinical years] weren't really approachable at all. They were just very mean and condescending, so it was like- now I just feel worse so why should I ask questions. It's okay, I'll YouTube that."
Participant SBG13

The one exception to this experience was learning during clinical skills sessions, this learning environment was expressed as intimate, conducive for student learning and valued by the student body.

"…I do have some good experiences and I think I will start off with that. I think the [good] interactions that I had with the doctors were in Clinical Skills, I learned a lot because they were open to us and allowed for mistakes."
Participant SWG5

"I only spoke to the doctors during Clinical Skills and stuff. That was the only time I interacted with doctors. I felt like most of them were very helpful and I really learned a lot from them."
Participant SBB7

Learning during the clinical years was largely positive. Smaller clinical groups created the opportunity for intimate, transformative and meaningful learning experiences. Most importantly learning during the clinical years contributed to the students' development of community identity.

"[The learning environment] is better, its *more intimate* because it isn't a class with 300 anymore"

Participant SWG1

"The times when I've been taught at the bedside have been… I think some of them have been really the best learning experiences I've ever had, to be honest…those experiences are *invaluable"*.
Participant SBB14

"In clinical years now, we are in their [clinical educators] setting, they are more comfortable…you learn a lot from them, not only in terms of academics but just how to function."
Participant SIB2

The descriptions of learning during pre-clinical and clinical years brought to the fore the impact symbolic access has on student learning. Events which contributed to awareness of symbolic access were predominantly clinical or participatory in nature, and these events were strongly linked with students' perceptions of positive learning experiences. For example clinical skills lessons facilitated symbolic access and the clinical skills lessons were perceived as valuable learning.

As students became aware of symbolic access, they described meaningful learning experiences connected to these experiences (Figure 5.2). Therefore, it can be suggested that symbolic access positively influences learning for the medical student. As students attained symbolic access, they concurrently described transformative and valuable learning experiences which were not expressed prior to attaining symbolic access.

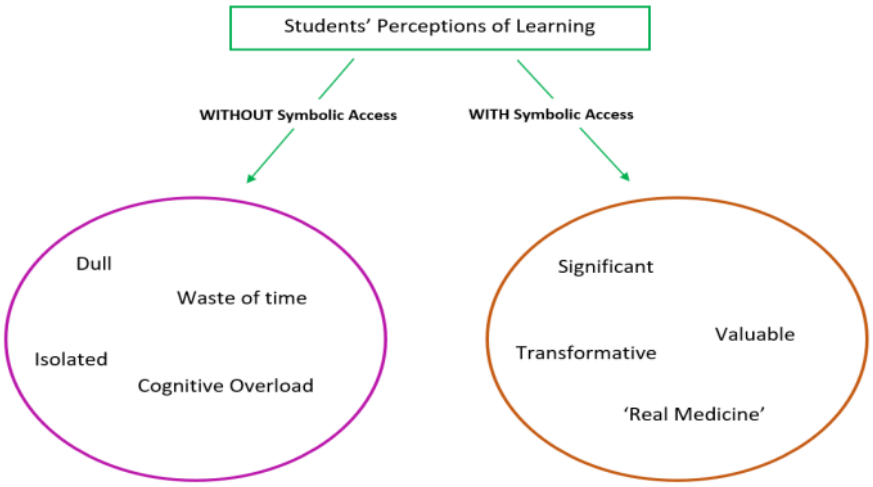

Figure 5.2: Students Perceptions of Learning with and without awareness of Symbolic Access

Clinical learning is said to be the cornerstone of medical education, as it is in this learning environment that students are able to participate in the medical community and develop both their clinical skills and professional identity. Medical students often perceive the tangible difference between the pre-clinical and clinical curriculums; and are able to articulate these changes in their learning due to the vast contrast of experiences.[143,144.]

In conclusion, unpacking how the outcome space related to symbolic access brought to light some interesting discussion points. While experiences of student rejection, alienation and exclusion remain prominent in the medical community, the medical student is still able to articulate an actualization of symbolic access, some negative community events even act as facilitators for symbolic access. Student learning was 'revived' by symbolic access, it facilitated the shift from disconnected, isolated and dead-end learning to applicable, contextual and concrete learning experiences.

Chapter Six: Conclusion

How does symbolic access to institutional culture affect learning as a medical student?

Circling back to the research question above, this research discovered that in medical education, symbolic access to institutional culture functions as a 'key' which unlocks meaningful learning experiences and community identity development for the medical student. In addition, it found that symbolic access is influenced both by positive and negative community encounters. These are noteworthy discoveries because they add to the qualitative and pedagogical gap of socio-relational and sociocultural influencers in the medical education community. The story of how students become aware of community inclusion and its influence on learning in medical education has not been thoroughly explored or articulated within the South African context.[49,50.] Introducing and exploring symbolic access in medical education hold value as it requires we delve into intangible, yet present, influences within the medical community.

This research adds to discussions around qualitative factors that influence student learning and contributes to scholarship of socio-relational and cultural factors which impact learning in South African medical education.

Chapter Seven: Recommendations

Using phenomenography as a foundation was fundamental to this research, its pedagogical focus means that the discoveries of this study can be used as recommendations to bridge the gap between research and pedagogy.[145] The following recommendations are informed by said discoveries.

Recommendation 1

A review and redesign of the pre-clinical curriculum in the medical programme, with specific focus on implementing pedagogy that increases student-educator interactions during the first four years of the academic programme. The current Clinical Skills teaching model functions as an example and template towards this recommendation.

Recommendation 2

Review and re-design of the entire medical curriculum to include longitudinal clinical clerkships, which spiral from the early years (1st-4th) into the later years (5th-6th) of the programme. The design of these clerkships should include clinical immersion and be intentional, with an aim to positively enculturate students into the medical community.

Recommendation 3

Constructional redesign of the *learning environment* (physical learning spaces both within and outside of scheduled class time: the classroom and campus), in order to create learning environments which achieve the promotion of learner centred, interprofessional education. This process needs to be facilitated by key roles players namely faculty management, educationalists, architects and students.

Recommendation 4

Scheduled regular individual or group discussions between Students of Colour and educators/staff in management with the specific intent of learning about and acknowledging the student's lived experience. From these engagements, staff and educators should work with these

students towards the co-creation of an inclusive medical school curriculum, culture, and environment, in which Students of Colour resonate and identify. Students of colour need to see themselves represented in the curriculum, amongst peers, and faculty, the failure to recognize themselves in the community, will continually leave the SoC with a feeling of deep alienation.

Recommendation 5

Further scholarship of symbolic access in medical education and higher education, in order to extend understanding of this phenomenon and deepen our understanding of its pedagogical impact. Symbolic access is a new and developing concept, this study has shown that it is a factor that influences student learning in medical education.

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