



Trust and entrustability in medical specialist training in South Africa



An Ubuntu-inspired pedagogy

Edited by
**Tasleem Ras, Sumaiya Adam, Louis Jenkins,
Lionel Green-Thompson & Vanessa Burch**

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An Ubuntu-inspired pedagogy

**Edited by
Tasleem Ras, Sumaiya Adam, Louis Jenkins, Lionel
Green-Thompson and Vanessa Burch**



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Research justification

The medical specialist training landscape in South Africa (SA) is grounded in a tradition of learning in the clinical workplace for at least four years, with a single exit examination assessing clinical competence, knowledge and complex clinical reasoning. However, given the broad scope of specialist practice, it is impossible to assess all aspects of training in this single assessment. Consequently, it is not possible to make a categorical statement on the holistic clinical competence of trainees using the data derived from the current assessment model.

A rational solution to this dilemma could be the introduction of formal continuous assessments within the workplace, aptly called workplace-based assessments (WBA). As the name implies, this is based on the overall performance of trainees in real-life situations. These assessments need to be well planned, implemented by appropriately trained supervisors, reported in a manner that facilitates defensible progression decisions about trainees and allow faculty to make final decisions about trainees' clinical competence across a range of domains that characterise the specific discipline. The evidence for the impact of this type of complex intervention on trainee performance, assessment quality and impact on skills development has been well documented in high-income countries, but less so in low-middle-income countries globally and even less in Africa.

This book addresses the crucial gap within the literature on WBA in medical specialist training in the context of African and low-middle-income countries. The primary aim was to present a socially accountable praxis of WBA in SA by bringing together locally generated research that described early initiatives at implementing WBA, key elements from the global literature and the lived experiences of the authors, who are all deeply involved in various aspects of specialist training.

Using a realist perspective, the authors foreground data that describe the SA context, given the stark inequalities across training sites and the attitudes and capabilities of supervisors and trainees who labour under immense clinical workloads. They employ an Ubuntu perspective to frame their reflections on the local and global literature, infused with their own experiences, which necessarily elevates the role of workplace relationships and social dynamics as these impact the learning and teaching environment.

What emerges from each chapter is a uniquely African proposition for medical specialist training, offering new ways of teaching and learning that are sensitive to the emotions, hierarchies, sensitivities and cultural dynamics that are typical of a diverse demographic context, without departing from the high-stakes technical competence required for medical specialist practice. This has implications for how health educational systems are

configured and how faculty are trained. The hypothesised impact in the short term would be more accurate assessments of clinical competence, in the medium term, a positive change in the socio-cultural dynamic of the clinical learning spaces and in the long term, the emergence of clinical services that produce better holistic outcomes for staff and patients.

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South Africa

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Abbreviations and acronyms, figures and tables appearing in the text

A-RICH	agency, reliability, integrity, capability and humility
AI	artificial intelligence
AMEE	Association of Medical Education Europe
ASSAf	Academy of Science of South Africa
BSc	Bachelor of Science
CanMEDS	Canadian Medical Education Directives for Specialists
CBD	case-based discussion
CBME	competency-based medical education
CCC	clinical competency committee
CLE	clinical learning environment
CMSA	Colleges of Medicine of South Africa
COC	compassion, openness, curiosity
DFMPC	Department of Family Medicine and Primary Care
DHET	Department of Higher Education and Training
DoH	National Department of Health
DOPS	direct observation of procedural skills
DPhil	Doctor of Philosophy
ELT	experiential learning theory
EPAs	entrustable professional activities
ePoL	electronic portfolio of learning
FAIMER	Foundation for Advancement of International Medical Education and Research
FCFP	Fellowship of the College of Family Physicians of South Africa
GEMP	Graduate Entry Medical Programme
Haemat	haematology
HPCSA	Health Professions Council of South Africa
HPE	health professions education
LGBTIQA+	Lesbian, Gay, Bisexual, Transgender, Intersex, Queer, Asexual and +
MBChB	Medicinae Baccalaureus, Baccalaureus Chirurgiae (Bachelor of Medicine and Bachelor of Surgery)

MELA	monitoring, evaluation, learning, adaptation
mini-CEX	mini-clinical evaluation exercise
MMed	Master of Medicine
MPhil	Master of Philosophy
MSc	Master of Science
MSF	multisource feedback
NAPC	National Academic Pathology Committee
NHLS	National Health Laboratory Service
NLP	natural language processing
PCAB	pre-consortium advisory board
PGDip	Postgraduate diploma
PhD	Doctor of Philosophy
PIF	professional identity formation
POPIA	<i>Protection of Personal Information Act</i> 4 of 2013
R2C2	build Relationships, explore Reactions and Content and Coach for Change
SA	South Africa
SAAHE	Southern African Association of Health Educationalists
SACOMD	South African Committee of Medical Deans
SKIPE	skills, knowledge, internal, past and external
SMU	Sefako Makgatho Health Sciences University
STAR	Statement of Awarded Responsibility
SWAT	Strengths, Weaknesses, Aspirations, Threats
TUFH	Towards Unity for Health
UCT	University of Cape Town
UFS	University of the Free State
VR	virtual reality
WBA	workplace-based assessment
WHO	World Health Organization
Wits	University of the Witwatersrand

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Glossary

Term	Definition
Ad hoc decision-making	Unstructured or informal judgement about trainee progress, often based on single or limited data points.
Agency	‘Proactive attitude towards work, team, safety and personal development that includes awareness of and acting upon the need for action even when outside of the strict definition of one’s responsibilities and practice of adaptive expertise. Agency can manifest within the context of one or more of the other four factors.’ (Ten Cate and Chen 2020, p. 1418)
Accreditation Council for Graduate Medical Education	A non-profit organisation in the United States responsible for accrediting graduate medical training programmes for physicians, including residency and fellowship programmes.
Agency, reliability, integrity, capability and humility (A-RICH)	A-RICH is used as a qualitative judgement framework – helping supervisors articulate why they feel comfortable (or not) to entrust a learner with a professional activity. It complements competency frameworks (such as Canadian Medical Education Directives for Specialists (CanMEDS) or Health Professions Council of South Africa (HPCSA) competencies) by focusing on trustworthiness attributes, not just technical skills.
Artificial intelligence	The field of computer science focused on creating systems that can perform tasks that normally require human intelligence – such as reasoning, learning, problem-solving, perception and language understanding.
Aspirational core entrustable professional activities (EPAs)	These EPAs are integral to the discipline’s scope but may not be consistently achievable at all training institutions because of limitations such as resource availability, local service configuration or insufficient clinical exposure. While not currently implementable across all training sites, they are important for future-proofing the training programme. A national task team should determine a timeline and strategy for supporting the transition of aspirational core EPAs into implementable core EPAs to ensure equitable training opportunities over time.
Assessment for learning	Assessment aimed at improving learning through feedback and guiding trainee development.
Assessment of learning	Assessment used to determine what trainees know, typically for high-stakes decisions.
Attitudes	The values, beliefs and professional behaviours expected of a competent health care provider.
Case-based discussion	Assessment based on a detailed discussion of a clinical case managed by the trainee.
Capability	‘The ability to perform a specific task in a variety of contexts and within an appropriate time frame, requiring a reasonable understanding and overall view of the clinical situation and ability to communicate and work effectively with others within a system.’ (Ten Cate & Chen 2020, p. 1418)
Clinical competency committee	A group of educators who review trainee performance data to make progression decisions.
Clinical learning environment	The overlap between the clinical context in which trainees learn and participate in patient care and the educational context which is guided by curricula, learning objectives, learning outcomes and assessments (Nordquist et al. 2019).
Clinical reasoning	The cognitive process used by clinicians to evaluate and manage patient problems.

Term	Definition
Coach	A developmental partner who supports a trainee's longitudinal growth. The coach facilitates self-reflection, goal setting and skill development, with the primary aim of unlocking the learner's potential. This relationship is typically confidential and non-evaluative, fostering psychological safety and encouraging honest exploration of strengths, challenges and professional identity formation.
Coaching	A trainee-centred, longitudinal process that promotes continuous development through guided reflection, feedback and goal-oriented dialogue. It emphasises personal and professional growth rather than immediate performance outcomes. Coaching interactions are collaborative, non-judgemental and non-evaluative, creating a safe space for trainees to explore their progress, identify learning needs and develop strategies for improvement over time.
Colleges of Medicine of South Africa	The Colleges of Medicine of South Africa is the national examining body for medical and dental specialists in South Africa, responsible for setting and administering postgraduate examinations, awarding specialist and subspecialist qualifications and promoting the highest standards in medical education and professional practice.
Compassion	Demonstrate emotional caring and kindness towards others, pay attention to patients' suffering and genuinely have the patient's best interests at heart.
Competency	The ability to do something successfully and efficiently, often defined in terms of knowledge, skills and attitudes.
Competency-based medical education	An outcomes-based approach to designing, implementing and evaluating medical training programmes using competencies as the organising framework.
Compassion, openness, curiosity	A cluster of interrelated professional attitudes and values essential for patient-centred and reflective practice. <i>Compassion</i> involves genuine care and kindness; <i>openness</i> reflects non-judgement, inclusivity and respect for diverse perspectives; and <i>curiosity</i> denotes a sincere interest in understanding patients' experiences, contexts and needs. Together, they underpin effective clinical reasoning, empathy and trustworthy professional behaviour.
Continuum of supervision	The range of oversight spans from direct to indirect supervision, depending on the trainee's competence.
Core entrustable professional activities (EPAs)	These are the essential professional activities that reflect the day-to-day responsibilities of the discipline. They are feasible to achieve at all accredited training sites and must be completed by all trainees before the completion of training. These EPAs represent the minimum criteria for safe, independent and competent practice and are therefore non-negotiable across all institutions.
Cultural humility	Process of openness, self-awareness, of being egoless and incorporating self-reflection and critique after willingly interacting with diverse individuals.
Curiosity (Interest)	A desire for knowledge, to explore and solve the patient's problem, includes an interest in the specific person and their context, including their narratives, values, preferences, psychology and emotionality, cultural situation and spiritual and existential concerns.
National Department of Health	A national government department responsible for setting health policy, coordinating public health services and overseeing the delivery of health care across South Africa.
Department of Higher Education and Training	A national government department responsible for overseeing post-school education and training, including universities, Technical and Vocational Education and Training colleges, community colleges and skills development initiatives.
Digital portal	An online platform used to manage and access assessment tools, feedback and records of trainee progress in real-time.

Term	Definition
Direct observation of procedural skills	A tool for assessing procedural skills through direct observation during real patient care.
Elective entrustable professional activities (EPAs)	These are advanced, subspecialty-specific or niche professional activities that go beyond the essential scope of general training. They are intended for high-performing trainees who have achieved a sufficient level of entrustment in the core EPAs. Elective EPAs offer opportunities for further development aligned with individual interests, emerging health system needs or academic and subspecialty career trajectories.
Entrustable professional activities (EPAs)	Key tasks of a discipline that can be entrusted to a trainee once sufficient competence is demonstrated.
Entrustment	The act of a supervisor granting a trainee the autonomy to perform specific units of work based on assessed competence.
Electronic portfolio of learning	A structured digital platform used by trainees to document, track and reflect on their learning, workplace-based assessments (WBAs) and competency development over time.
Feedback	Information given to a trainee about their performance to guide improvement.
Feedback literacy	The ability of trainees to understand, engage with and act upon feedback to improve their performance.
Formative assessment	Assessment for learning aimed at providing feedback to improve performance.
Health Professions Council of South Africa	A statutory body established to regulate health professions in South Africa in terms of the <i>Health Professions Act</i> 56 of 1974, ensuring that health care practitioners meet and maintain professional, ethical and educational standards.
Health professions education	A field focused on the education, training, assessment and professional development of health care providers, encompassing curriculum design, teaching methods, assessment strategies, faculty development and educational research to improve health care outcomes.
Humility	'Discernment of one's limitations; willingness and ability to ask for help and feedback; receptivity to insights of patients and co-workers; and ability to learn and develop from mistakes, feedback and the expertise of others.' (Ten Cate & Chen 2020, p. 1418)
Integrity	'Truthfulness, benevolence and patient-centredness, where expertise is employed to benefit patients and decisions are motivated by concern for and made in the best interest of patients.' (Ten Cate & Chen 2020, p. 1418)
Joint Health Sciences Education Committee	A bi-ministerial committee of the Department of Higher Education and Training and National Department of Health, with National Treasury participation, that coordinates strategy, policy and funding in health sciences education and bridges the gap between the health and education sectors for coherent workforce planning.
Knowledge	The theoretical and factual information a trainee is expected to acquire and apply in clinical practice.
learn@CMSA	An e-learning platform developed by the Colleges of Medicine of South Africa in collaboration with the South African Committee of Medical Deans.
Learning plan	A personalised plan developed by the trainee (often with input from a supervisor) that identifies goals, learning strategies and timelines.
Logbook	A structured record maintained by the trainee to track procedures, patient encounters and clinical activities.
Medical specialist training	Advanced education and supervised practice required to become a specialist in a specific area of medicine, following completion of a general medical degree.

Term	Definition
Memorandum of Understanding	A formal, non-binding agreement between two or more parties outlining their mutual intentions, roles and areas of collaboration.
Mentee	An individual who is guided and supported by a mentor in their personal and professional development.
Mentor	An experienced professional who provides guidance, support and career development advice to a trainee, often beyond immediate clinical supervision.
Milestones	Developmentally based observable markers of a trainee's progress towards competency in a specialty or subspecialty.
Mini-clinical evaluation exercise	A structured assessment of a clinical encounter, including observation and feedback.
Monitoring, evaluation, learning, adaptation	Integrated framework for tracking progress, assessing results, ensuring transparency to stakeholders and applying lessons learned to improve programmes and decision-making.
Multisource feedback	Feedback collected from various members of the health care team on a trainee's performance.
National Academic Pathology Committee	A national coordinating body for academic pathology in South Africa, responsible for aligning training, assessment and academic standards across pathology disciplines.
National Health Laboratory Service	A public health laboratory service providing diagnostic pathology, surveillance and research to support health care delivery in South Africa.
Natural language processing	A branch of artificial intelligence that enables computers to understand, interpret and generate human language.
Openness (non-judgement/ flexibility)	A willingness to consider and accommodate a range of perspectives and views, having cognitive flexibility to hold multiple views, to be non-judgemental – approaching the person without prejudice and preconceived notions; to be conscious of the risk of falling prey to cognitive biases, to honour diversity, be inclusive and treat each person with respect.
Pre-consortium advisory board	Temporary or preparatory governance group convened before a formal consortium is officially established.
Professional identity formation	Developmental process through which individuals internalise the values, norms, roles and behaviours of their profession, integrating them into their self-concept to 'think, act and feel' like a member of that professional community. It is shaped by formal education, role modelling, workplace culture and reflective practice.
<i>Protection of Personal Information Act</i>	South Africa's data protection law that governs how personal information is collected, processed, stored and shared, to safeguard privacy and prevent misuse.
Portfolio	A curated collection of a trainee's work and assessments that demonstrates learning, progress and achievement of competencies.
Programmatic assessment	An approach that uses multiple assessment methods over time to inform high-stakes decisions and support learning.
Progression decisions	Judgements made about a trainee's advancement based on accumulated evidence of competence.
Reflection	A critical thinking process where trainees analyse their clinical experiences to improve future practice.
Reflective practice	A process where trainees critically assess their experiences to improve their clinical and professional skills.
Reliability	'Consistent, predictable and conscientious behaviour driven by a sense of accountability and responsibility.' (Ten Cate & Chen 2020, p. 1418)
Remediation	Structured support and intervention provided to a trainee not meeting expected competencies.
Service level agreement	A formal, legally binding document between a service provider and a client that defines the specific services to be delivered, the expected performance standards and the responsibilities of each party.

Term	Definition
Skills	The practical abilities and techniques required to perform clinical tasks effectively and safely.
South Africa	A country located at the southernmost tip of Africa, officially known as the Republic of South Africa. It is a constitutional democracy with three capital cities (Pretoria, Cape Town and Bloemfontein) and the context in which this training, assessment and regulatory framework applies.
Southern African Association of Health Educationalists	A professional body that brings together individuals involved in health professions education across Southern Africa to promote scholarship, innovation and collaboration in teaching, learning and assessment.
South African Committee of Medical Deans	A national body representing the deans of all medical schools in South Africa, providing a platform for collaboration, policy alignment and advocacy on matters relating to medical education, training and health workforce planning.
Star rating (Statement of awarded responsibility)	A rating system that reflects the level of supervision required for a task, used to communicate trainee entrustment.
Summative assessment	Assessment of learning used to make decisions about progression or certification.
Supervisor	An individual with formal authority and responsibility for overseeing a trainee's clinical or educational activities. The supervisor ensures patient safety, monitors performance, provides evaluative feedback and determines whether trainees meet required competencies and milestones. The supervisory role includes accountability, decision-making and, when necessary, corrective action to maintain standards of practice.
Supervisor report	A summary of a trainee's progress and performance by their clinical supervisor.
Supervisor's global judgement	A supervisor's holistic evaluation of a trainee's performance, often used to inform entrustment decisions.
Strengths, Weaknesses, Aspirations, Threats	A reflective tool used by trainees or training programmes to analyse current performance and context; identifying strengths to build on, weaknesses to address, aspirations for growth and potential threats or challenges to progress.
Terms of reference	A formal document outlining the purpose, scope, structure and operating procedures of a committee, working group, advisory board or project team.
Trainee	A learner enrolled in a medical training programme, including interns, residents, registrars and fellows.
Trainee requiring additional support	A trainee identified as (1) struggling or potentially unable to meet expected competencies without intervention; and/or (2) needing tailored educational or supervisory interventions to achieve expected competencies within the training programme timeline.
Trainer	A health care professional responsible for teaching and assessing trainees in the clinical environment.
Trust	The degree of confidence a supervisor has in a trainee to carry out a clinical activity without direct supervision.
University Capacity Development Grant	In South Africa, refers to the University Capacity Development Grant, a key instrument managed by the Department of Higher Education and Training under the broader University Capacity Development Programme.
Validity	The degree to which an assessment measures what it is intended to measure.
Virtual reality	A computer-generated, immersive, three-dimensional environment that a user can interact with – often through a headset and motion controllers – to simulate real or imagined scenarios.
WBA encounters	Individual episodes of workplace-based assessment (WBA), including observation, feedback and documentation.
Workplace-based assessment	Assessment conducted in the clinical setting where real work occurs, focusing on observation and feedback in real-time practice.

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Brian Gardner trained as an anaesthesiologist and practised as a specialist at the University of the Witwatersrand (Wits), South Africa, circuit from 2000. He was the Head of Department of Anaesthesia and Pain Management at Helen Joseph Hospital, South Africa, from 2019 until 2024. Thereafter, he joined the Education and Assessment team at the Colleges of Medicine

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Daniel Nel is a general surgeon and senior lecturer at UCT and Groote Schuur Hospital, South Africa, where he serves as the programme convener for postgraduate training in General Surgery. He holds a Doctor of Philosophy (PhD) in surgical education and has a special interest in assessment. He has led the development of the specifications of a digital electronic portfolio of learning (ePoL) that will be used to track medical specialist training in South Africa and co-leads an initiative aimed at enhancing the research skills of medical specialist trainees.

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Gert van Zyl currently holds the position of Dean in the Faculty of Health Sciences University of the Free State (UFS), South Africa. He is an Association of Medical Education Europe (AMEE) Inaugural Fellow. Van Zyl engaged in Southern African Association of Health Educationalists (SAAHE) activities and has been Chairperson of SAAHE National for four years. Van Zyl has served in the past on several of the Medical and Dental Board committees and on the Health Professions Council of South Africa. He also contributed to teaching, research and service delivery on an academic level and was recognised by the university for his contributions on a national and international level. He has contributed to more than 20 articles in the last five years and has supervised more than 20 PhD students and a number of Master's degree students. Van Zyl has been the recipient of a number of International and National awards, including a certificate of appreciation of service in 2016: Health Professions Council of South Africa; Fellowship of AMEE (2015); Deputy Vice Councillor's Award for Community Engagement (2013); and taken up in the 'Hall of Fame' of the Postgraduate School of UFS for work done as researcher and study leader. He is a qualified Family Medicine Specialist with

another five postgraduate qualifications. He served on the Board of the Council of Health Services Accreditation of Southern Africa in distinct positions. In addition, he served in 2024 as Chair of the South African Committee of Medical Deans (SACOMD) and on the Executive Committee of SACOMD.

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Gerda Botha is the Academic Project Leader of the School of Medicine at SMU. She has extensive experience in curriculum design and academic planning of curricula in the School of Medicine, including subspecialist training programmes. Botha is a member of various governance structures at the school and committees of the Senate, and she also drives the Learning Opportunities, Objectives and Outcome Platform mapping and related educational research in the school. She is seasoned in the design and development of decentralised platforms for training and early patient exposure for undergraduate medical students.

Her research interests are mainly in health professional education, focusing on curriculum mapping, social responsiveness, module integration in medical education and interprofessional medical education.

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Louis Jenkins is appointed in the Division of Family Medicine and Primary Care at Stellenbosch University in South Africa and holds an honorary associate professor appointment in the Department of Family, Community and Emergency Care at UCT. He is a clinician and Head of Clinical Unit of the Department of Family and Emergency Medicine at George Regional Hospital in the Garden Route and Central Karoo districts of South Africa, where he has been working for the last 25 years. His PhD focused on developing a national portfolio for Family Medicine. Jenkins headed up a working group in the National College of Family Physicians that developed entrustable professional activities (EPAs) for postgraduate family medicine training in the country. He led the development and implementation of the national ePoL of the South African Academy of Family Physicians. He is the chair of the national Clinical Competency Committee of the College of Family Physicians and has published on work-based assessment, leadership development, palliative care and health worker resilience.

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Muller is convenor for the CMSA Diploma in HIV Management, and she serves on the CMSA Senate. Muller is part of the National CMSA/SACOMD committee responsible for implementing WBAs in postgraduate medical education and is one of the facilitators rolling out the Supervisor Workplace Assessment and Teaching Training for clinical supervisors across the 10 South African medical universities.

Muller is on the steering committee for the South African Association of Health Educationalists Eastern Cape Chapter and is an executive committee member of the Rural Doctors Association of Southern Africa, where she oversees the mentoring portfolio and manages the Rural Onboarding programme. She serves on the executive board of the Professional Association of Transgender Health in South Africa.

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Richard Cooke holds qualifications in finance (Bachelor of Business Science) and medicine, having spent his initial professional years in the financial sector before transitioning wholly into the health sector. He subsequently specialised in Family Medicine, earning Fellowship of the College of Family Physicians (FCFP) and an MMed (Wits) in Family Medicine. The Department of Family Medicine and Primary Care is home to Divisions of Family Medicine, Emergency Medicine, Rural Health, Clinical Associates and Sports and Exercise Medicine, where Cooke holds overall responsibility for the respective undergraduate and postgraduate health sciences academic programmes in five districts across two provinces. Cooke chairs the Graduate Entry Medical Programme Curriculum Committee (GEMP 3&4) and is the Wits Nelson Mandela Fidel Castro Collaboration Director. He chairs the Wits Adler Museum of Medicine Advisory Board. He is a member of the SACOMD WBA National Steering Committee and the SACOMD Private Health Sciences Training Task Team. He is an examiner for the Fellowship of the College of Family Physicians of South Africa (FCFP [SA]).

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An advocate for competency-based education, Lahri has led the division's postgraduate curriculum renewal, integrated entrustable professional activities into WBA and advised on accreditation of emergency medicine programmes in Southern Africa. Internationally, he contributes to the International Federation for Emergency Medicine Core Curriculum and Education Committee, shaping global training benchmarks.

Lahri's scholarly interests centre on assessment validity, feedback in clinical learning environments and structured oral examinations. He supervises postgraduate research in HPE, reviews for leading journals and frequently presents at regional and international conferences.

Committed to service and mentorship, he balances clinical leadership with teaching, regularly examining for the CMSA and mentoring emerging clinicians and researchers. His work reflects a passion for improving emergency care and advancing medical education across the continent.

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In addition to her educational contributions, she leads a diabetes-in-pregnancy clinic and engages in research on maternal health and non-communicable diseases. She collaborates with local and international colleagues and contributes to networks such as International Federation of Gynaecology and Obstetrics and World Health Organization (WHO) working groups. As a supervisor and mentor of postgraduate students, she values shared learning and collective scholarship and remains committed to advancing both clinical care and medical education in her field.

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He led the development of clinical examinations for the College of Family Physicians of South Africa for almost a decade and played a central role in incorporating communication technology into these high-stakes assessments. During this time, he also convened the specialist training programmes for Family Medicine at UCT. Prior to his work in specialist training, Ras worked as a consultant clinician in urban and rural primary care settings, as well as in undergraduate medical education as a senior lecturer.

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Driven by a vision of equitable specialist training, Harris is advancing training in the field of otology across Africa through an African Otology Fellowship Programme, a strategic initiative designed to elevate expertise and improve patient outcomes across the continent.

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As MMed Programme Convenor, she oversees the training of 37 emergency medicine registrars across UCT and Stellenbosch University. Khan has contributed to curriculum development projects across Africa, including neonatal critical care transfers and doctoral education frameworks.

Beyond academia, she provides clinical outreach services in the Western Cape. Her commitment to transformation, equity and community engagement exemplifies her dedication to developing socially accountable health care practitioners who serve South African communities effectively.

Chapter 1

Overview

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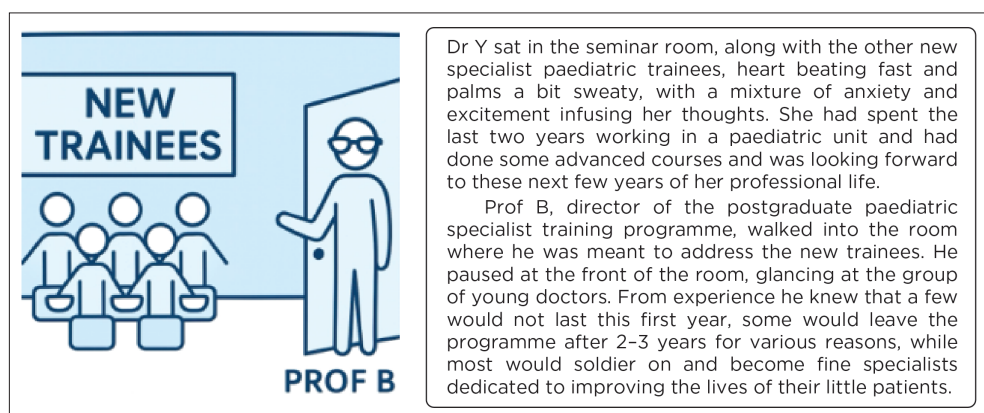
■ Abstract

Medical specialist training in South Africa is undergoing a significant transformation, as training programmes adopt work-based learning, workplace-integrated learning and workplace-based assessment (WBA) as part of their pedagogy. This is in keeping with a global move towards evidence-based educational processes.

Workplace-based assessment emerged from competency-based medical education (CBME), but instead of using simulation for teaching and assessment, it is integrated into real-world clinical practice. This enhances the validity of teaching, learning and assessment, given the inherent focus on safe and effective patient care. It is context-rich and, given that most of the global literature emanates from high-income countries, a publication that speaks directly to contextual factors in low-middle-income contexts became necessary.

This book is an output of ongoing collaboration between a group of South African medical educationists, managers and clinician leaders, who started working together in 2022. It presents a synthesised approach to

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Source: Figure created by Sumaiya Adam (2026).

FIGURE 1.1: First meeting between Dr Y and Prof B.

implementing WBA in resource-constrained contexts and takes into account the unique cultural, social and relational nature of clinical teaching and learning that cannot be ignored when considering such a significant system transformation. We do this by framing the work within an Ubuntu-inspired pedagogy.

The book remains true to the technical aspects of a WBA programme, with each chapter dealing with a specific component of WBA. The reader is taken from an introduction to the key concepts, the social dynamics of the supervisor-trainee dyad, the inner workings of workplace learning, teaching and assessment, to the summative process of the clinical competency committee (CCC). Chapter 7 deals with the requirements of a digital information system, and the final chapter details the change management process that we followed, highlighting some lessons and achievements. The addenda are composed of a series of brief ‘how-to’ documents that could inform the development of standard operating procedures.

■ Introduction

This publication, written as a resource for faculty development in the South African context of medical specialist training, represents the collective efforts of a group of clinicians, educationists and educational leaders. It proposes a realist interpretation of how workplace-based assessment (WBA) can be implemented in this context and explores the literature with sufficient depth and insight to allow the reader to engage with theoretical and practical aspects of WBA. The intended audience includes trainee specialists, workplace supervisors, programme directors, heads of academic departments, deans of health sciences faculties, assessment bodies and health system managers.

■ Advancing medical specialist training in South Africa

Medical specialist training in South Africa is a well-developed enterprise, producing practitioners who have made, and continue to make, major contributions to national, continental and global expansion of knowledge and skills. With the advent of democracy in 1994, the need to provide quality care to the entire population led to the expansion of specialist training programmes. Concurrently, evidence-based medicine entered health professions education (HPE), which directly challenged the traditional hierarchy. Inevitably, the health workforce and specialist training programmes also transformed and democratised, which in turn led to transformed assessment practices.

By the beginning of this century, medical specialist training in South Africa (SA) had embraced competency-based medical education (CBME), resulting in modernised assessment practices emphasising standardised and objective examinations. This reflected a valid way of 'assessment of learning' in relation to specific clinical competencies, often manifesting as objective structured examinations using standardised scenarios that simulate real life. However, despite the overall improvement of our assessment practices, we were still not capturing the full picture of trainees' ability to function *in the workplace*, especially in relation to patient safety, professional engagement with colleagues and managing themselves in real-life clinical practice.

■ Why workplace-based assessment?

Workplace-based assessment, emerging from the CBME framework, addresses many of these concerns while paying attention to the realities of daily clinical work. It embeds assessment in the close working relationship of the supervisor and trainee, structuring the ongoing multiple conversations in the supervisor-trainee dyad. When data describing the trainee's development over time emerge from these interactions and are adequately captured, we are able to bring the challenges of patient safety, professional behaviour and managing self in challenging contexts into the educational space.

While the global community has produced a rich body of literature on WBA practices in many contexts, the focus remains on wealthier countries, which makes the translation of knowledge to practice in the South African context challenging. This book represents an attempt to address this dilemma by drawing on the richness of the global experience, while also grappling with the realities of working within constrained resource settings and the inherited inequalities which persist in our society. Additionally, the

WBA praxis is proposed within a framework of Ubuntu, which provides culturally rich guidance for core relational and social aspects of a comprehensive WBA programme.

The authors and editors are all South African medical and/or education specialists who trained in the local context and are now teaching and researching within this context. They bring their collective knowledge and lived experiences to bear in this unique contribution to medical specialist training in SA.

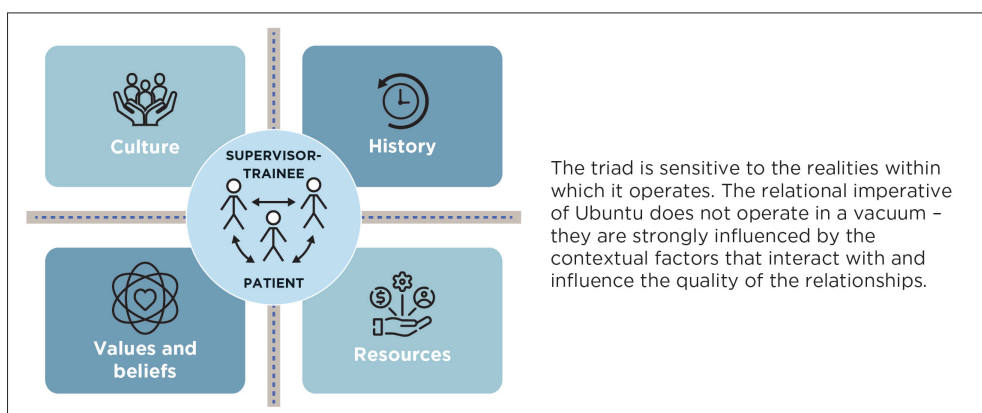
■ What did we do?

This project arose out of a desire to make WBA a credible system of education for medical specialist trainees in SA. In order to do so, we set ourselves the following objectives:

1. Identify existing WBA initiatives in SA.
2. Understand factors which have facilitated and hindered the implementation of existing WBA initiatives.
3. Explore conceptions and misconceptions of supervisors and trainees in participating universities regarding key concepts in WBA.
4. Capacitate supervisors and trainees to adapt and implement WBA effectively in their settings.
5. Synthesise local and global evidence on WBA to design a strategy for implementation in the South African context.

■ How did we go about this?

The practice of WBA is essentially a series of social events, marked by interactions between trainees and patients, supervisors and trainees and supervisors within assessment committees. This book adopts the lens of Ubuntu, the dominant indigenous paradigm of personhood in this region (Mbiti 1969). Ubuntu can be loosely translated as ‘I am because we are, and because we are, I am’. It emphasises the interconnectedness between all humans within the social space and necessarily foregrounds relationships as a key social construct that facilitates our work (Mbiti 1969; Tutu 1999). What flows from this is a recognition that the concept of ‘good’, within an Ubuntu ethical framing, is all that which facilitates healthy relationships at micro-, meso- and macro-levels. In relation to HPE and WBA, the aspiration is that the functional supervisor-trainee dyad, influenced by Ubuntu principles, replicates itself in engagements with patients, colleagues and peers and animates governance structures at the institutional level. A triad of relationships emerges that includes the patient and their context in the training process, as depicted in Figure 1.2.



Source: Figure created by Sumaiya Adam (2026).

FIGURE 1.2: The Ubuntu triad of trust in health professions training, influenced by contextual realities.

Influenced by the interconnected reality of social life espoused by Ubuntu, we naturally seek to build alliances with willing partners. What emerges from our Ubuntu-inspired thinking is a pedagogy that foregrounds human relations, with the understanding that optimised learning and teaching in WBA requires healthy relationships. These relationships and encounters evolve within the context of clinical spaces, and consequently, the learning outcomes of this pedagogy are necessarily explicit about professional identity formation (PIF), the supervisor-trainee dyad, the social networks that animate our praxis and the development of critical contextual awareness (Ras 2023).

With the aspiration to effectively implement WBA as a common agenda, various stakeholders were able to complement each other in addressing the many challenges which crossed our path. As early as 2017, the Colleges of Medicine of South Africa (CMSA) published a short article by the then President in their official publication, *Transactions* (2017), followed by an editorial in a leading South African medical journal (Sathekge 2017). Several discussions ensued, without resulting in substantial action, until the coronavirus disease 2019 (COVID-19) pandemic reached our shores in 2020. With the CMSA and the South African Committee of Medical Deans (SACOMD) leading the charge, complemented by a generous injection of funding from the Department of Higher Education and Training (DHET), there have been significant gains made since 2021. This includes finding pathways into all specialist training institutions, accessing resources to fund our work and co-developing measures of success. Importantly, we identified the need to engage in collective reflective practice to ensure that lessons learned translated into strategic adjustments in real time.

■ Outline of book

Each chapter has been written by a team of authors with specific interests in the topic being presented. Authors have engaged with global and local literature, infusing the writing with their personal experiences. We believe this makes the book relevant to the South African context. The journey of an imaginary supervisor–trainee dyad, Dr Y and Prof B, is followed across the chapters of the book, demonstrating how the principles being discussed find their way into our daily practice.

Chapter 2 introduces the concepts which are key to understanding WBA and sets the stage for a reader who might be a novice to the topic. Chapter 3 explores the complex social space in which WBA takes place, and the professional identity of the trainee is formed, drawing the reader into some of the realities facing specialist training in the local context. Chapter 4 presents the concept of entrustable professional activities (EPAs), the unit of analysis for WBA and provides a narrative of how trainees earn trust. Chapter 5 expands on the concept of trust as central to WBA, integrated into functional relationships and also into notions of trusting someone as an emerging specialist responsible for the safety and well-being of their patients and clinical teams. This trust is earned as a result of the workplace observations described in Chapter 6. The data generated in these workplace observations need to be collated into information systems, the focus of Chapter 7. The next chapter, Chapter 8, takes the reader through the steps of making collective decisions in the clinical competency committee (CCC), which represents the high-stakes component of the WBA framework. Chapter 9 explores some of the individual, relational and contextual issues that may compromise learning. The final Chapter 10 outlines how this entire project came together, providing a narrative for other resource-constrained settings embarking on a similar process.

This book, representing three years of work and almost a decade of conversations within medical specialist training circles in SA, is the first locally produced publication that pulls all the components of WBA into one publication. We hope that our contribution will assist departments and disciplines implementing WBA and that their experiences will further shape this book into a truly useful addition to the literature of the Global South.

■ Declarations

■ Ethical considerations

This chapter did not require ethical clearance or consent as it synthesises existing literature and does not present primary research.

■ Author's contribution

Tasleem Ras: Conceptualisation, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Writing – original draft, Writing – review & editing.

The author confirms that this work is entirely their own, has reviewed the chapter, approved the final version for submission and publication and takes full responsibility for the integrity of its findings.

■ Artificial intelligence-assisted content generation

This book includes cartoons, figures and visual elements that were created with the assistance of artificial intelligence tools, including ChatGPT and Canva. Sumaiya Adam directed the generation process and reviewed all outputs to ensure accuracy, relevance and alignment with the content of the book.

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■ Competing interests

The author declares that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this chapter.

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■ Disclaimer

The views expressed in this chapter are the author's own and not an official position of the institution, funder or the publisher.

What constitutes a comprehensive workplace-based assessment programme?

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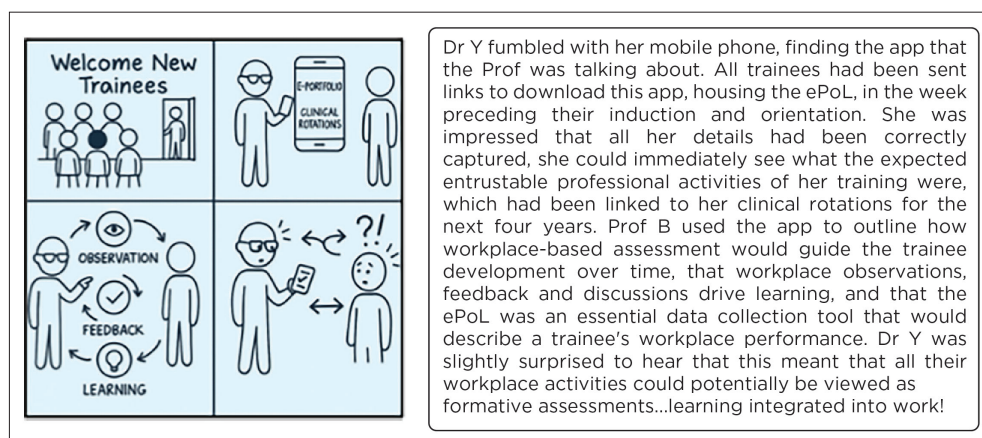
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■ Abstract

This chapter introduces the essential components of a comprehensive workplace-based assessment (WBA) programme for medical specialist training in South Africa (SA). Workplace-based assessment is both a formative and summative process that supports the development of clinical competence and professional identity through real-time, structured assessments in authentic clinical environments. The framework centres on entrustable professional activities (EPAs), which define the day-to-day responsibilities of a specialist and guide assessment through progressive entrustment decisions that reflect increasing trainee autonomy. A multi-source approach, which includes direct observation, case-based discussions, longitudinal observation and product evaluation, provides rich, contextualised insights into the trainees' performance over time.

Assessment tools are designed to balance meaningful data capture with ease of use, ensuring sustainability in busy clinical settings. Entrustment decisions are grounded in both individual trainee attributes and the socio-cultural values of the South African context, including the principles of Ubuntu, which emphasise relational competence, compassion and community responsibility. The importance of feedback as a collaborative



Source: Figure created by Sumaiya Adam (2026).
Key: ePoL, electronic portfolio of learning.

FIGURE 2.1: Dr Y discovers the mobile app.

and reflective learning process is highlighted, as is the pivotal role of clinical competency committees (CCCs) in synthesising performance data to determine readiness for independent practice.

The integration of digital platforms enhances the efficiency, transparency and scalability of WBA systems. Finally, the chapter explores the systemic and institutional requirements for successful implementation of WBA at scale, including governance, faculty development and equitable access. Readers are encouraged to explore the relevant chapters in this book for a more in-depth explanation of each key concept and component.

■ Introduction

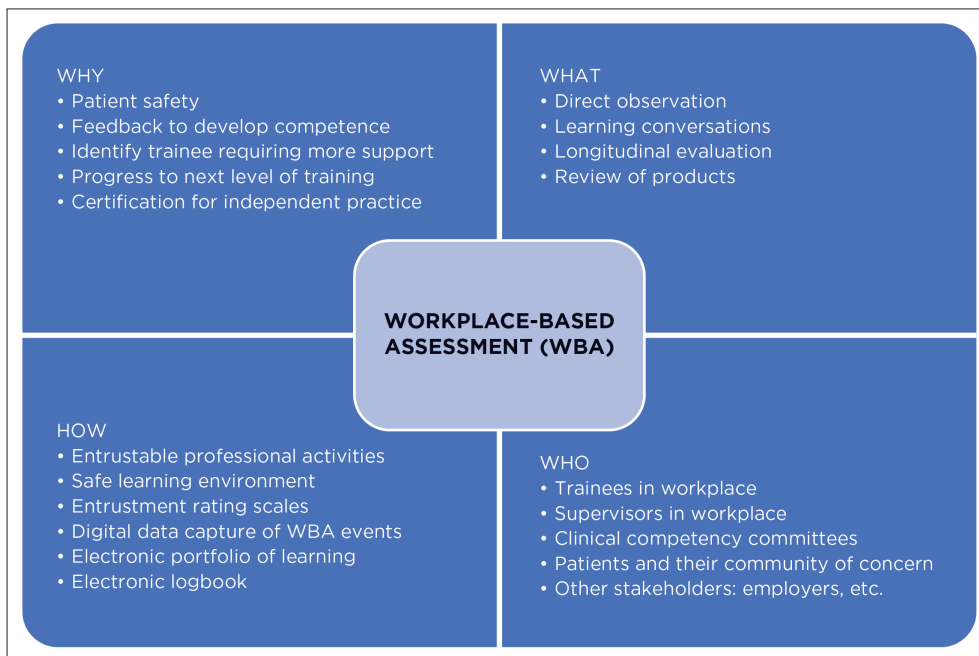
This chapter provides an overview of the key ingredients of workplace-based assessment (WBA) programmes for medical specialist training in South Africa (SA). The chapter aims to show the relationship between the different components and provide the reader with a ‘road map’ to navigate the respective chapters. The book carries a ‘storyline’ to reflect the learning journey of trainees, supervisors and, ultimately, the patients we serve.

■ Key components of workplace-based assessment

Workplace-integrated learning and WBA are essential parts of clinical training programmes (Council on Higher Education 2011). This book focuses specifically on WBA and how it offers trainees regular opportunities for structured engagement with supervisors who provide feedback on observed or reviewed workplace activities or products using levels of entrustment (progress towards independent, unsupervised practice) as an indicator of increasing competence. Over time, these multiple observations create a comprehensive overview of trainee progress, culminating in a final decision about ‘fitness to practice’ and approval to undertake national capstone specialist certification examinations. As a multi-step assessment of fitness to enter independent clinical practice, WBA makes a critical contribution to the trainee’s journey towards becoming a specialist medical practitioner (Mash, Jenkins & Naidoo 2024; Ten Cate et al. 2016).

There are four key components of a WBA programme, as shown in Figure 2.2. Each of these elements is briefly described in this introductory chapter.

What constitutes a comprehensive workplace-based assessment programme?



Source: Figure created by Sumaiya Adam (2026).

FIGURE 2.2: Key components of a workplace-based assessment programme.

■ Entrustable professional activities: Defining the day job of a specialist

Entrustable professional activities (EPAs) are units of professional practice that capture the essential tasks and responsibilities of a specialist in their daily work. Entrustable professional activities provide clear and observable descriptions of the ‘day job’, what competent specialists do routinely and independently in the workplace. Unlike competencies, which speak of the attributes of the trainee, EPAs are grounded in real clinical practice, making them intuitive for both supervisors and trainees. They serve as a bridge between competency frameworks and WBA by translating complex skills, knowledge and professional attitudes (competencies) into tangible activities. Each entrustable professional activity represents a unit of work that trainees can progressively be entrusted to perform with decreasing supervision as they demonstrate increasing competence. This framework ensures that training and assessment are aligned with the realities of clinical service, focusing on meaningful, high-stakes responsibilities. By structuring learning and assessment around EPAs, postgraduate programmes can promote accountability, ensure readiness for independent practice and support holistic professional development tailored to the actual role of the specialist (Ten Cate 2013).

TABLE 2.1: Comparison of entrustable professional activities, competencies and milestones.

Domain	Entrustable professional activities	Competencies	Milestones
Definition	Units of professional work that can be entrusted to trainees once competence is demonstrated	Underlying abilities (knowledge, skills, attitudes and behaviours) that professionals must develop	Observable, developmental stages of progress towards competence in specific competencies
Purpose	Describes the real-world clinical tasks a specialist performs in their daily job	Describes the attributes or abilities doctors must possess	Breaks down EPAs into training expectations (developmental steps) for each year of training
Example	'Lead the management of a labour ward' or 'Perform laparoscopic cholecystectomy'	Medical expertise, communication, collaboration, professionalism (e.g. CanMEDS roles)	'Explain the risks to patients using plain language' (a communication milestone for EPA one to be completed by the end of Year 1)

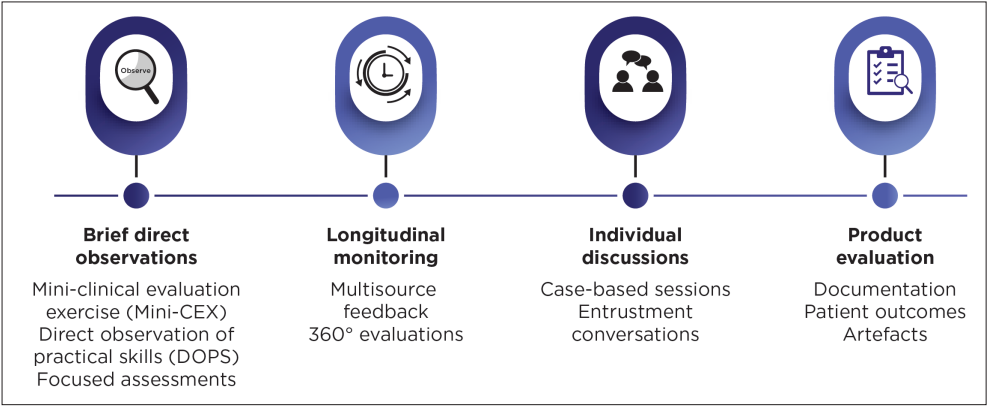
Source: Table created by Sumaiya Adam (2026).
Key: CanMEDS, Canadian Medical Education Directives for Specialists; EPAs, entrustable professional activities.

Table 2.1 highlights the key differences between EPAs, competencies and milestones, clarifying how each contributes to practical training and assessment (Englander et al. 2017).

■ Windows into competence: Four key sources of information

Workplace-based assessment provides a structured approach to evaluating clinical competence in real-world settings. To ensure comprehensive and balanced assessments, information should be gathered from multiple sources that reflect different aspects of trainee performance (Figure 2.3) (Ten Cate et al. 2024). The trainees' competence is judged through multiple, complementary sources of information. We begin with what we see: observation of clinical encounters and procedures where supervisors watch trainees perform technical tasks and other day-to-day activities, noting not only accuracy and safety but also communication and professionalism. These snapshots are deepened by case-based discussions, which are structured conversations that unpack a specific patient's journey, allowing trainees to articulate clinical reasoning, justify decisions and reflect on patient care. Across weeks and months, longitudinal observations stitch these moments together, providing a continuous view of growth, consistency and responsiveness to feedback. Finally, we examine trainees' tangible outputs through product evaluation, reviewing written work, protocols, notes, reports and other documentation to gauge thoroughness, clarity and adherence to the principles of good clinical practice. Together, these strands create a rich, narrative tapestry of performance and progression. Each source captures unique insights into knowledge, skills and professional behaviour across time and context. Using a generic data capture tool nuanced to each source of information facilitates the assessment process and enables meaningful feedback.

What constitutes a comprehensive workplace-based assessment programme?



Source: Figure created by Waseela Khan and Sumaiya Adam, adapted from Ten Cate et al. (2024).
FIGURE 2.3: Sources of information and examples of appropriate tools.

■ Observation tools for meaningful assessment of entrustment

There are over 50 WBA tools described in the literature, making it easy to feel overwhelmed when starting out (Burch 2019). Despite their variety, most tools that assess trainees’ ability to perform clinical tasks capture three essential elements regarding the activity: context, performance and feedback (Table 2.2). While detail can be captured in workplace observation tools, such complex tools are not popular in busy workplace settings and risk lower uptake and limited use by supervisors. Simple tools that capture the minimum amount of meaningful data required, as outlined in Table 2.2, are easier to use and provide more feasible and sustainable options for busy clinicians supervising trainees.

Longitudinal assessments, such as end-of-rotation reviews, can complement direct observations by highlighting growth in broader domains such as leadership and teamwork, although they are less appropriate for assessing specific task execution because of recall bias (Turnbull et al. 2000).

TABLE 2.2: Essential elements of a workplace-based assessment tool.

Component	Description
Context	Includes date of observation, clinical rotation, supervisor observing the activity and the specific activity observed. Complexity and acuity of the clinical scenario may also be recorded.
Performance	Includes a brief narrative describing what the trainee did, the level of independence and where help was needed. Supervisors also provide a prospective entrustment-supervision rating indicating the level of supervision required for the next attempt.
Feedback	Outlines what the trainee did well and what could be done differently, including clear, actionable steps for development. Feedback should be given verbally but also recorded to support reflection and progress decisions.

Source: Table created by Sumaiya Adam (2026).

■ Progression to autonomous practice: Entrustment rating scales

Supervisors make daily, informal, ad hoc decisions to trust trainees from the first day of their training. When trainees are allowed to see patients on their own in a clinic or do a call without a supervisor present on site, we are trusting that they can manage patients safely without direct supervision. Supervisors continuously adapt the level of autonomy of the trainee, depending on the task (Jonker et al. 2024). In clinical learning, the purpose of trust is ‘to support safe and standards-based patient care in conjunction with trainee learning’ (Gin et al. 2024).

In the framework of WBA, these entrustment decisions are recorded, providing a narrative over time of the trainees’ journey towards competence and ultimately unsupervised, independent practice. For medical specialist training in SA, we have adopted five levels of entrustment (Table 2.3). It is critical to note that entrustment is described as levels of progressive trust to independent practice, which should not be scored using numerical scales. The reason for this is clear – entrustment is a categorical variable rather than a continuous variable.

■ Making entrustment decisions: Ubuntu perspective

In SA, the concept of Ubuntu emphasises interconnectedness, compassion and communal responsibility (Gade 2013), which provides an additional

TABLE 2.3: General framework of permissions related to the level of supervision.

Level of entrustment	What can I trust this trainee to do?	Example: Entrusted to do a caesarean section
Level 1	The trainee is present and observes only	A trainee can be trusted to be in the theatre to observe the procedure
Level 2	Trainee acts with direct, proactive, on-site supervision	A trainee can be trusted to perform the C-section, assisted by the on-site supervisor
Level 3	On-site supervision Trainee acts with indirect, reactive supervision: supervisor available on-site to provide in-person assistance	A trainee can be trusted to do the C-section, with a supervisor on site
	Off-site supervision Trainee acts with indirect, reactive supervision: supervisor reachable by phone and able to attend on-site, as required*	A trainee can be trusted to do the C-section, with a supervisor available via phone, and can arrive on-site at short notice should the need arise
Level 4	Trainee acts independently: supervisor reachable by phone, if required	A trainee can be trusted to do a C-section with an off-site supervisor who can be called to discuss the patient
Level 5	Trainee supervises junior HCWs, with full clinical responsibility for the team’s practice	A trainee can supervise and train junior doctors in doing a C-section

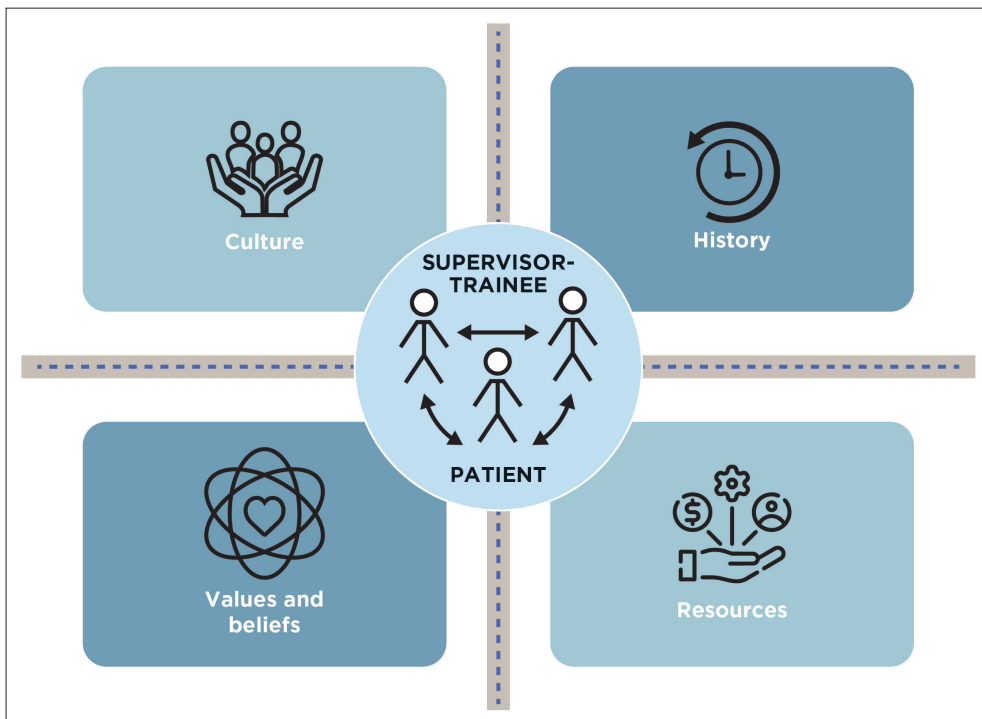
Source: Table created by Sumaiya Adam (2026).

Key: C-section, Caesarean section; HCWs, health care workers.

*Note: Geographical distance and travel time are critical factors to consider. Training facilities should regulate timeous supervisor availability requirements accordingly.

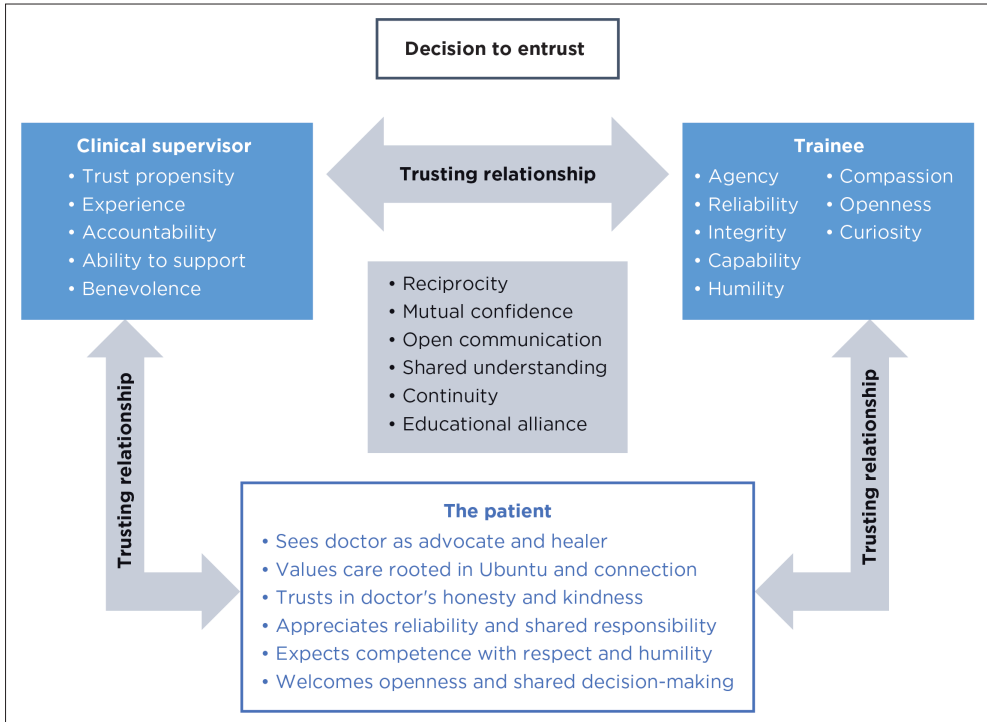
essential outward-looking focus of engagement with various stakeholders, including patients and their families. In health professions education (HPE), Ubuntu highlights the trainee's role within the health care team and relationship between supervisors, trainees, patients and the community (Ras 2022), aligning with socio-cultural values in SA (Figure 2.4). Integrating the principles of Ubuntu into WBA acknowledges the importance of relational competence alongside the development of professional identity. This reinforces a contextually relevant and holistic approach to entrustment in HPE in SA.

In contrast, the agency, reliability, integrity, capability and humility (A-RICH) model centres on the critical aspects of an individual's internal development, which is an essential foundation for engaging in health care underpinned by the principles embodied in Ubuntu. This model identifies five facets of trainee trustworthiness that form part of the considerations of supervisors – A-RICH (Ten Cate & Chen 2020). This model focuses on the inward-looking attributes of trainees, emphasising self-awareness, personal accountability and internal motivation. These qualities are essential in WBA as they reflect the trainees' readiness to be entrusted with increasing clinical responsibility (Figure 2.5). Supervisors consider these factors, beyond technical competence, when making entrustment



Source: Figure created by Sumaiya Adam (2026).

FIGURE 2.4: Key interactions within the clinical training ecosystem in the context of Ubuntu.



Source: Figure created by Sumaiya Adam, adapted from Jonker et al. (2024).

FIGURE 2.5: The trainer-trainee-patient triad.

decisions in the setting of patient care (Ten Cate & Chen 2020). Taking into account the Ubuntu perspective and studies that explore non-academic attributes of 'good doctors' (Lambe & Bristow 2010; Mokhachane et al. 2024; Nicolaides 2023; Pieterse et al. 2023; Schnelle & Jones 2022), we propose adding three additional professional qualities for clinicians to the A-RICH framework: *compassion* (emotional caring towards others), *openness* (willingness to accommodate a range of perspectives and/or inclusivity and/or non-judgement) and *curiosity* (interest in the person's problem and their wider cultural context). Compassion, openness and curiosity are key qualities that underlie the principles of interconnectedness, inclusivity and cultural competence considered important to an Ubuntu perspective in HPE. Chapter 4 unpacks Ubuntu further in terms of the implications of 'trust' and entrustment.

■ Types of entrustment decisions

Two levels of entrustment decisions are being incorporated in postgraduate HPE in SA: ad hoc (formative) and summative (Jonker et al. 2024). Individual WBA activities focus on making ad hoc entrustment decisions on specific tasks, which are then collated under a larger EPA. Furthermore, entrustment

decisions focus on looking into the future and asking whether supervisors should consider trusting trainees to act safely and independently going forward, rather than just deciding about the level of entrustment for the single observed event that has taken place (Ten Cate et al. 2015).

Using the caesarean section example (Table 2.3), supervisors assign trainees' specific entrustment levels after observing them in theatre. Supervisors need to be aware of the forward-looking nature of entrustment decisions. For trainees, level 4 or 5 is the aim, which indicates that supervisors can trust trainees to perform a caesarean section without supervision after hours. At strategic points in training programmes, summative entrustment decisions are made by clinical competency committees (CCCs) who evaluate EPAs holistically. Once CCCs determine that trainees can be entrusted to perform EPAs independently (as outlined in Table 2.3), the EPAs are considered attained (Gin et al. 2024).

■ Enhancing workplace-based assessment through digital integration

Paper-based systems for capturing WBA data have several limitations that reduce their acceptability, particularly for trainees (Marty et al. 2023). These systems often create unnecessary administrative burdens and lack the functionality to develop comprehensive, easily accessible portfolios of learning for summative entrustment decisions. Trainees struggle to refer to prior feedback, and CCCs are constrained in their ability to make well-informed, high-stakes decisions based on scattered, incomplete or inadequate (too few observations) records.

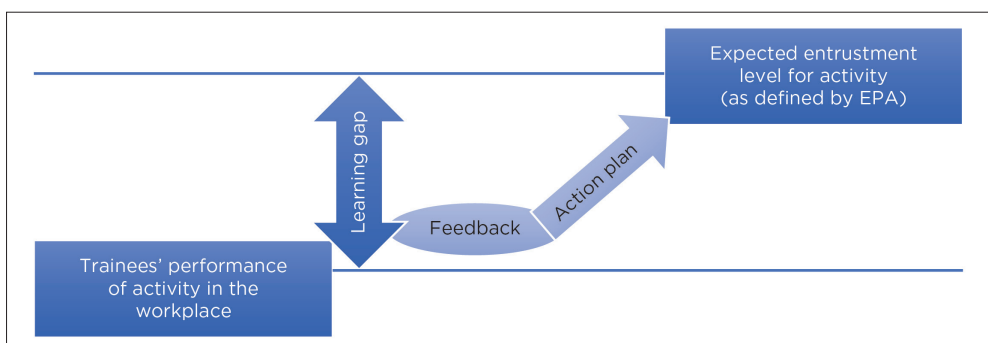
Digital platforms are a vital component for delivering effective, scalable WBA. They offer an efficient and user-friendly alternative to paper-based systems. The widespread availability of multiple digital devices in clinical settings makes it feasible to capture WBA data electronically. A digital system performs three core functions: it enables trainees to request observations for specific tasks, allows supervisors to complete observation reports and provide timely feedback, and ensures that the observation data are automatically captured and stored to create a digital record for review. This creates a growing, structured portfolio of learning, which includes observations that support trainees' reflection and high-stakes decision-making regarding trainee progression and/or readiness for certification. Moreover, digital systems can aggregate and display data through interactive dashboards. These may serve multiple purposes, such as tracking an individual trainee's progress, monitoring participation within teams and supporting the CCCs in reviewing longitudinal data. Additional features, such as EPA descriptions and faculty development resources, may further enhance the platform's educational value.

While digital platforms offer many advantages, their implementation must also consider contextual constraints in resource-variable settings. Access to reliable internet connectivity, adequate devices and technical support cannot be assumed across all clinical training sites. In some settings, intermittent connectivity or limited Wi-Fi access may restrict real-time data capture. Therefore, digital WBA tools should be designed to be low-cost, accessible and equitable, with functionality that allows offline data entry and later synchronisation when connectivity becomes available (Agbeyangi & Suleman 2024). Considering these practical constraints during system design is essential to ensure that digital solutions support, rather than hinder, the consistent and equitable implementation of WBA across diverse training environments.

■ Learning conversations: Feedback to turn insight into action

Feedback is at the heart of WBA. From the perspective of the feedback provider, they engage in a process of providing 'specific information about the comparison between a trainee's observed performance and a standard, given with the intent to improve the trainee's performance' (Figure 2.6) (Burgess et al. 2020). The supervisor observes trainees performing an activity in the workplace and decides how far away they are from being entrusted to perform the observed task independently. The supervisor co-creates an action plan with the trainee to engage with, to achieve the expected level of entrustment. The feedback provider must be a professional role model and facilitate trainee reflection (Ramani et al. 2019).

However, feedback should not only be viewed from the perspective of supervisors. Trainees should learn to actively seek out feedback, be receptive to feedback, and initiate and implement co-created action plans (Ramani et al. 2019). For feedback to be effective, it must be situated in a trusting relationship and a safe learning environment (Ramani et al. 2019; Ramani & Krackov 2012).



Source: Sumaiya Adam's own work adapted from Burch (2019).

Key: EPA, entrustable professional activity.

FIGURE 2.6: Comparison between observed and expected performance.

Supervisors' expectations of trainee competence also influence how performance is interpreted and how feedback is provided. In workplace settings, supervisors may vary in their ability to accurately calibrate expectations of competence, which can influence entrustment decisions and the quality of feedback given to trainees (Castanelli et al. 2022). Cognitive biases such as the Dunning-Kruger effect, where individuals with lower levels of expertise overestimate their competence, may contribute to misjudgements about expected performance standards (Rubin & Froustis 2023). In addition, challenges with inconsistent supervision or limited supervisor availability have been described in some training environments, which may further compromise opportunities for meaningful observation and feedback (Erumeda, George & Jenkins 2024). These factors highlight the importance of faculty development, calibration of supervisory expectations and consistent engagement of supervisors in the workplace to ensure that feedback remains constructive, reliable and aligned with the goals of WBA.

For effective implementation of WBA, supervisors must be trained on the importance of fostering safe learning environments, the socio-emotive skills needed to build trust in the supervisor-trainee relationship and to give effective feedback (Bagwandeem & Singaram 2016).

■ **Clinical competency committees: Turning observations into decisions**

Clinical competency committees play a central role in the implementation and success of WBA. They are formally constituted committees, responsible for making informed, collective judgements about trainees' progress and readiness for increased responsibility or independent practice. Clinical competency committees with a developmental approach focus on supporting trainees' growth over time, identifying strengths and guiding progress through feedback and mentoring. Unlike a problem-identification approach, which highlights deficiencies, the developmental model fosters a culture of learning, reflection and improvement, promoting long-term competence and professional identity formation (PIF).

Rather than relying on a single assessment, CCCs review and synthesise multiple sources of assessment data, including records of direct observations, case-based discussions, reports of longitudinal observation and product evaluations, to evaluate trainee progress across the EPAs, which frame the key outcomes of the training programme. Clinical competency committees primarily serve to identify trainees who require additional support or remediation and those ready to advance to the next level of training or to undertake final certification examinations for independent practice as specialist medical practitioners (Englander et al. 2024; Jenkins et al. 2025).

■ Compromised learning and teaching

It is not uncommon during a lengthy training programme that challenges may arise, which could provide obstacles to learning. Both the trainee and supervisor are vulnerable to internal or external factors that may impact their ability to learn or teach. Quite often, the underlying factors are not clear and present as undesirable behaviours in the workplace, such as absenteeism, unprofessional behaviour (being rude and/or bullying and/or manipulative, etc.) and rigidity with poor insight (Christensen et al. 2016). Such behaviours can have a negative impact on the supervisor-trainee relationship, the working and learning environment and ultimately impact on patient safety. In addition, clinicians face a higher risk of burnout, anxiety and depression, which can negatively impact their own well-being. Workplace-based assessment provides an opportunity to give feedback on observed behaviours in the workplace and makes it possible to identify the trainee or supervisor in difficulty at an early stage. By engaging in remediation early on, one can mitigate the negative impact these challenges can have on teaching and learning (Saedon et al. 2012).

■ Implementing workplace-based assessment at scale: A system-wide commitment

Implementing WBA at scale is a transformative and complex undertaking that requires coordinated engagement across the entire HPE ecosystem, including university governance structures, supervisors, trainees, employers, funders, regulators and the public. Workplace-based assessment represents a shift from high-stakes, end-point examinations to continuous, trust-based assessment in authentic clinical environments. It is not merely a technical change but a process of sociocultural transformation (Harris et al. 2003).

Success depends on balancing bottom-up engagement with top-down support. While national bodies and governance structures provide strategic scaffolding, implementation must be co-owned by those at the coalface. A purely top-down approach risks superficial compliance, while a bottom-up effort without policy alignment can result in fragmentation and inequity. Early, inclusive stakeholder engagement fosters shared mental models, enhances ownership and builds collective accountability (Ras et al. 2023, 2024).

Robust change management is essential. Faculty development is central to equipping supervisors for their evolving roles in assessment, mentorship and feedback. However, successful implementation of WBA at scale must also account for the practical realities of clinical training environments. Supervisors often work in settings characterised by high service demands, resource constraints and competing clinical, teaching and administrative responsibilities, which may limit opportunities for direct observation,

feedback and assessment documentation. Institutions therefore need to create enabling environments that recognise these pressures, through realistic expectations, appropriate infrastructure and equitable access across diverse clinical platforms (Harris et al. 2003). These contextual factors are introduced here as key influences on WBA implementation and will be explored in greater depth in subsequent chapters.

Appropriate governance structures should ensure equal institutional representation, shared responsibility, legal legitimacy and fiscal sustainability and fiduciary compliance. Regulatory frameworks within training institutions need to evolve to incorporate WBA for the purpose of reporting on training progress and ultimately certification, aligned with national qualification framework requirements. Financial investment is critical. Costs span digital platform development, faculty development and implementation support. Multi-stakeholder funding models could ensure equity, prevent duplication and greatly improve efficiency (Hays et al. 2024).

Ultimately, WBA at scale is about embedding a culture of meaningful, authentic and continuous assessment in the workplace. It aims to produce trainees who are not only competent but trustworthy, through a process that is inclusive, accountable and aligned with the health needs of a complex and unequal society.

Practice points

- *Entrustable professional activities as the foundation:* Entrustable professional activities translate broad competencies into concrete, observable clinical tasks that define a specialist's daily work. They allow for progressive entrustment, aligning training with authentic practice.
- *Multiple sources of assessment for a holistic view:* Competence should be judged using a combination of direct observation, case-based discussions, longitudinal observation and product evaluation, creating a richer and more reliable picture of trainee progress.
- *Simple, sustainable tools for busy clinical settings:* Workplace-based assessment tools must balance meaningful data capture with feasibility. Tools that capture context, performance and feedback in a concise format are more likely to be used consistently in practice.
- *Entrustment as a forward-looking decision:* Supervisors record progressive levels of trust, not as numerical scores but as categorical entrustment levels. These decisions reflect both technical competence and professional qualities such as reliability, integrity, compassion and openness.
- *Feedback as a learning conversation:* Effective feedback is collaborative, reflective and forward-looking. It should be co-created with trainees, be situated in a trusting relationship and be used to guide personal and professional growth.
- *System-wide support for workplace-based assessment implementation:* Successful large-scale WBA requires faculty development, digital platforms for data capture, governance structures and shared ownership across universities, supervisors and regulators. Without system-level commitment, WBA risks fragmentation and inequity.

■ **Declarations**

■ **Ethical considerations**

This chapter did not require ethical clearance or consent as it synthesises existing literature and does not present primary research.

■ **Authors' contributions**

Vanessa Burch: Conceptualisation, Data curation, Writing – original draft, Writing – review & editing.

Sumaiya Adam: Conceptualisation, Data curation, Writing – original draft, Writing – review & editing.

Madeleine Muller: Data curation, Writing – original draft.

Daniel Nel: Data curation, Writing – original draft.

All authors reviewed the chapter, contributed to the discussion of results, approved the final version for submission and publication, and take responsibility for the integrity of its findings.

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Waseela Khan was responsible for visualisation of some figures.

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What constitutes a comprehensive workplace-based assessment programme?

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Identity, relationship and context

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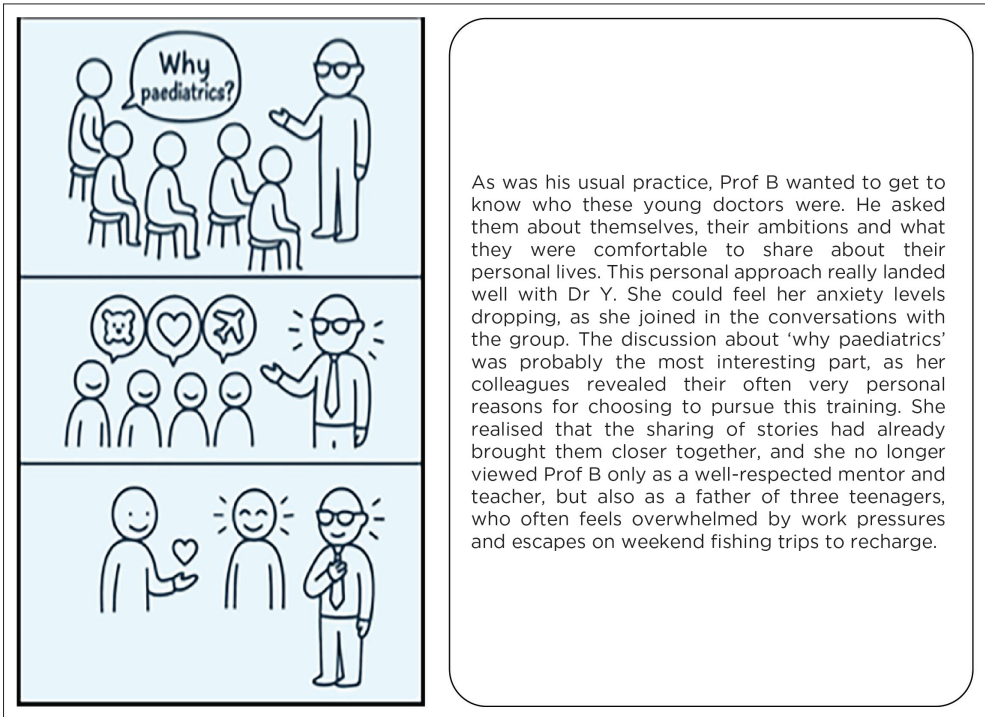
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■ Abstract

This chapter explores how identity, relationships and context converge to shape the educational impact of workplace-based assessment (WBA) in health professions education (HPE). Rather than treating identity as a fixed outcome, we draw on contemporary theories of professional identity formation (PIF) to frame it as a fluid, relational process, formed through participation, trust, feedback and moments of emotional connection. The relationship between supervisors and trainees is presented not as a simple hierarchy, but as a dynamic space where identity is continuously negotiated. Power dynamics, psychological safety and the often-unspoken messages of the hidden curriculum all influence how this relationship unfolds.

Beyond these interpersonal encounters, we locate WBA within the everyday realities of clinical teams, where communication, trust and shared responsibility are as crucial as technical skill. Using the lens of social capital, we explore how practices such as feedback and observation are influenced by institutional culture and peer networks. When WBA is aligned with a culture of openness and support, it can strengthen collective competence, particularly in environments stretched by limited resources.

Recognising the unique contextual realities of the South African health care system, the chapter foregrounds issues of linguistic diversity, historical inequities and systemic resource challenges. These contextual factors influence not only the feasibility of implementing WBA but also the inclusivity and legitimacy of identity formation processes. Ultimately, we argue that WBA must be reimagined as a socially situated and ethically grounded practice. It should contribute not only to the assessment of competence but also to the cultivation of professional identity and the development of safe, inclusive clinical training environments.



Source: Figure created by Sumaiya Adam (2026).

FIGURE 3.1: Prof B gets to know his trainees.

■ Introduction

How do identity, emotion and power shape what is learned, how learning occurs and who gets to learn in the clinical workplace? While workplace-based assessment (WBA) is often framed as a technical mechanism for evaluating competence, its implementation occurs within deeply human systems marked by relationships, hierarchies and histories. Learning in the workplace does not take place in a vacuum. It is embedded in the affective and social fabric of clinical teams and shaped by the broader cultural, institutional and political context in which learning unfolds (Baboolal & Singaram 2024; Fleer et al. 2024; Kilminster et al. 2007; Ras et al. 2023).

In this chapter, we invite you to look beyond checklists and scoring rubrics to consider the relational and contextual dimensions that underlie all activities in the learning environment. We begin by exploring the interplay between supervisor and trainee identities, emphasising professional identity formation (PIF) as a social, evolving and often contested process. The second section examines how supervisor-trainee relationships, mediated by power and emotion, can either support or constrain learning, especially through the lens of emotional competence and psychological safety.

Next, we explore the social dynamics of the clinical workplace, highlighting how the presence or absence of social capital shapes teamwork, feedback and patient safety. Social capital is a key element, and indeed a key outcome, of Ubuntu, which frames the pedagogy we propose for our context (Ras et al. 2023). Finally, we ground these discussions in the South African context, unpacking how historical inequities, language and resource disparities influence both educational opportunities and perceptions of legitimacy in training.

Taken together, these sections argue that meaningful assessment reform requires not just technical solutions but a deeper re-imagining of identity, relationship and context as foundational to learning. The chapter speaks to educators, supervisors and policymakers seeking to cultivate inclusive, emotionally competent and socially responsive clinical learning environments.

■ Meeting of two identities: Supervisor and trainee

■ Dual identity dynamics in clinical workplace

Professional identity is the evolving sense of self that individuals develop as they grow into their professional roles. In medical training, professional identity encompasses more than just acquiring technical competencies. It involves internalising the values, responsibilities, communication styles and ethical standards of the medical profession. This includes how one thinks, speaks, acts and makes decisions in alignment with the professional culture (Cruess et al. 2015).

In medical specialist training, the clinical workplace is both a health care delivery setting and a pedagogical environment. Within this dual-purpose space, the identities of supervisors, as practitioners and educators and trainees, as learners and emerging specialists, interact and develop dynamically. These identities are not static but are shaped contextually by clinical demands, institutional norms and evolving professional expectations (Fleer et al. 2024).

Hence, identity formation emerges through the micro-interactions of daily clinical work. Educators influence trainees' professional trajectories by modelling values, responding to challenges and appropriately sharing authority – actions that guide how trainees construct their future roles (Jarvis-Selinger, Pratt & Regehr 2012). In turn, supervisors adapt their own educator identities informed by trainee engagement, illustrating the relational and evolving nature of identity co-construction. It is worthwhile to note at this stage that, in a worldview informed by Ubuntu, the identity formation of the individual is inextricably interlinked with the collective, as its central maxim is 'I am because we are, and because we are, I am' (Mbiti 1969).

The supervisor–trainee dynamic is further complicated by power differentials, role ambiguity and implicit expectations (Baboolal & Singaram 2024). These tensions can either hinder learning or promote professional development, depending on how they are managed. Trust, psychological safety and transparent communication are essential for cultivating a productive learning environment (Cruess et al. 2015), while structured feedback and open dialogue are critical to navigating this relationship effectively. Furthermore, effective supervision requires adaptive engagement responsive to the developmental stage of the trainee and the context at hand (Kilminster et al. 2007).

■ Trainee's identity: Becoming through participation

Trainees occupy a transitional professional space, gradually shifting from dependence to autonomy. Their identity evolves through legitimate participation in clinical practice, with supervisors acting as gatekeepers and validators of competence (Jarvis-Selinger et al. 2012; Lave & Wenger 1991). This developmental process is cumulative, shaped over time through feedback, reflection and immersion in a professional community (Fleer et al. 2024). However, PIF does not unfold evenly for all. Drawing on intersectionality, it becomes clear that social markers such as race, gender, socioeconomic status and cultural background intersect to create differentiated experiences of belonging and legitimacy in clinical spaces (Varpio et al. 2025; Wyatt et al. 2021).

Power dynamics further complicate this development. Supervisors, often unconsciously, may grant or withhold learning opportunities, feedback or professional recognition in ways that reflect implicit biases or assumptions about who 'fits' into the profession (Sawatsky et al. 2023). As a result, trainees must engage in 'identity work', actively managing how they present themselves, to secure their place within the community of practice. This reinforces structural hierarchies and may impede the authentic development of identity for those who feel pressured to assimilate rather than integrate their whole selves into professional life.

To support equitable identity formation, supervisors must recognise the heterogeneity of trainee experiences and shift away from rigid models of identity acquisition. Varpio et al. (2025) propose a more inclusive metaphor, 'PIF as functional crafting', that encourages flexibility, values diversity and allows trainees to shape a professional identity that is both competent and personally meaningful. Hence, fostering space for both personal identity and professional development is critical to shaping medical professionals as agentic actors in their practice. However, further efforts are required to meaningfully support and sustain this integration within medical education.

Chapter 5 further elaborates on how identity construction is influenced by role ambiguity and how professional roles evolve through iterative engagement in clinical practice.

■ Impact of supervisor–trainee relationships on learning and training

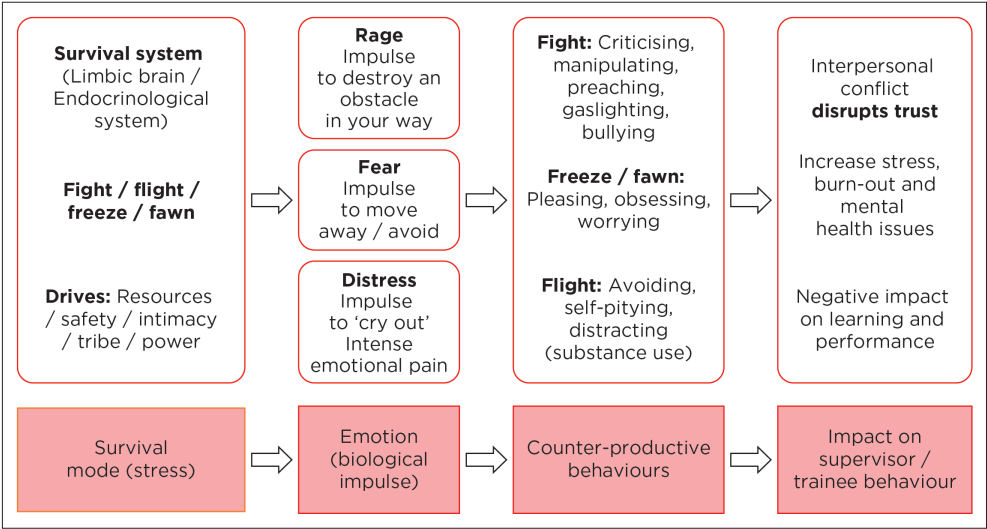
In the field of medical education, there is a strong drive to reimagine the traditional power dynamics that remain and/or continue to be a predominant feature in clinical learning environments. Although regulatory bodies place strong emphasis on respectful and empowering relationships between a supervisor and a trainee, one must be cognisant of the so-called ‘hidden curriculum’, here understood as the implicit messages imparted by the interpersonal, social and motivational-psychological aspects of medical education (Lawrence et al. 2018). Too often, workplaces still foster a clinical learning environment where trainees may be humiliated, uncertainty is frowned upon, emotion is seen as a weakness, and trainees are expected to ‘suck it up’ (Crowe & Brugha 2018; Schwartz, Osterberg & Hall 2022). Young doctors are ‘medically socialised’ to become detached, non-complaining and seemingly infallible clinicians, and they instil this in the next generation (Crowe & Brugha 2018). We cannot change the learning culture if we do not account for the unrecognised hidden curriculum that shapes the supervisor–trainee relationship.

Each relationship is different and is strongly influenced by the work cultures in which it is embedded. Imagine, for example, a ‘depreciative’ or toxic work environment where most of the human interactions are negative, critical or unengaged. Relationships that create stress, anxiety or anger adversely affect learning can lead to higher rates of burnout and increased rates of medical error. In contrast, an appreciative working environment that is embedded in affirmation and positive emotional engagement will build a foundation of trust and safety between a supervisor and trainee, a bedrock of an effective emotional learning environment and an essential component of being able to provide effective feedback. However, not all seemingly positive environments support learning. Feedback may be influenced by social desirability bias, with supervisors providing overly favourable evaluations to maintain collegiality or avoid reputational risk. This relational dishonesty can obscure performance gaps and limit meaningful feedback, posing a direct risk to patient safety by prematurely deeming trainees competent. Balancing supportive relationships with patient safety requires honest, evidence-informed assessment, where trust is grounded in accountability rather than leniency (Alshareef, Fletcher & Giga 2024; Gin et al. 2024; Schwartz et al. 2022).

What is described previously implies that there may exist a stark separation between the respective identities of the supervisor and trainee, not only at the level of technical competence, but also as members of the same team. Ubuntu proposes a resolution to this dilemma by suggesting that the borders between the supervisor and trainee, at the level of human existence, are porous and as Desmond Tutu proclaims, 'inextricably linked to [...] the other' (Tutu 1999, p. 36). If we accept that this unavoidable connection at an existential level exists, which can be optimised for teaching and/or learning by planning for productive encounters, then our pedagogical strategies can be adjusted to align with this.

What are the necessary underlying attitudes or behaviours required by a supervisor to help build such a relationship of trust? This chapter argues that emotional competence may lie at the heart of it. Emotional competence includes awareness of emotions (in oneself and others) and the ability to regulate emotions appropriately and consistently (Brasseur et al. 2013; Mikolajczak 2009) and may give some insight into what drives inappropriate behaviour in the workplace. Relationships are built through communication, and emotion plays a powerful part in how we communicate with each other. Respectful, open and affirming communication strategies are essential to help trainees recognise and reach their potential. This is not in dispute, and yet there are times when a supervisor may criticise, humiliate, ignore or even yell at a trainee. Stress contributes largely to these responses, with our body producing archaic biological impulses to deal with a threat (Figure 3.2). These impulses were originally designed to counter *physical* threats, for example, the biological impulse to move away from harm (fear), the biological impulse to destroy an obstacle in the way (rage) or when lost and/or rejected, the biological impulse to cry out so that help may come (distress and/or grief) (Panksepp 1998). Although useful when in physical danger, these impulses that drive behaviour are usually counterproductive in the context of healthy relationship-building (Chamine 2012).

Using this framework, we can better understand the contribution of stress to negative behaviours that break trust. The stressed supervisor who discovers that a trainee has made a mistake may respond out of such unconscious emotional impulses, without reflecting on the effects of their actions on the trainee. They might criticise and humiliate the trainee for their inadequacies (rage) or avoid them and manage the error without giving feedback (fear) or simply feel hopeless and unhappy (distress) (Figure 3.2). A supervisor in the grip of a negative emotion, operating from a position of power in relation to the trainee, becomes a toxic focus in the workplace, usually avoided by both colleagues and trainees alike. Unfortunately, a single negative interaction can have a powerful impact on the supervisor–trainee relationship. Using shame, fear or domination as a tool to teach has a negative impact on learning, trainee wellness and clinical



Source: Figure created by Madeleine Muller (2026).

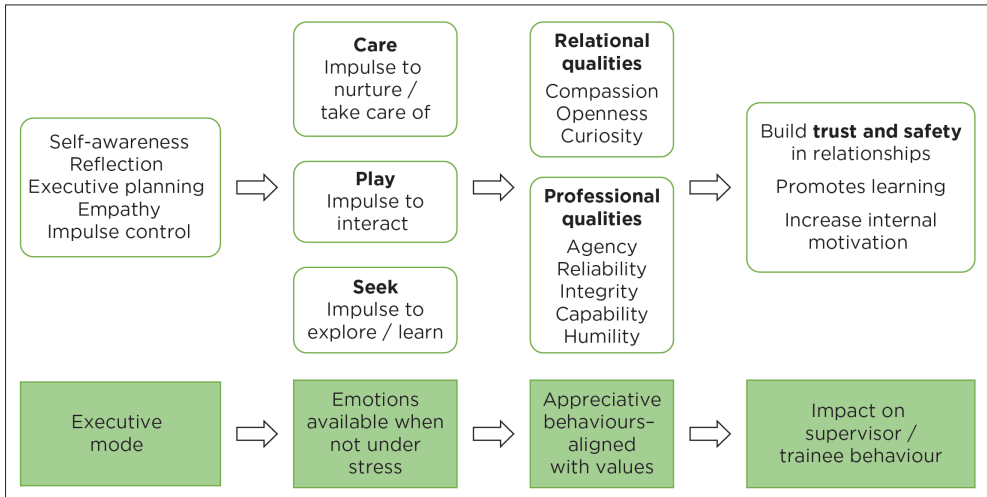
FIGURE 3.2: The influence of stress on emotions and the behaviour of the trainer and/or trainee.

care (Chamine 2012; Lusk 2023). This is further explored in Chapter 8. When considered from the perspective of an Ubuntu-informed pedagogy, which foregrounds kindness, self-awareness and harmony within relationships, it is clear that this pedagogy could mitigate some of the less desirable influences described here.

■ What are the ingredients for an effective and positive supervisor–trainee relationship?

Emotional competence is key. When the supervisor is calm and collected, the executive mode in the prefrontal cortex dominates. Important emotions become available, including the impulse to nurture (care), the impulse to interact with the world for enjoyment (play) and the impulse to explore and discover (seek). This provides the foundation for two important qualities necessary for a positive relationship (Figure 3.3).

The first is respect and a willingness to honour the autonomy and independence of the other. This is a mutual process and becomes visible through admiration and affirmation of each other. It is important that both the supervisor and the trainee, while recognising the strengths and weaknesses of the other, endeavour to value and admire each other as human beings. This may be difficult when building a relationship with someone different or challenging. Because of the power imbalance between supervisor and trainee, the onus is on the supervisor to overcome



Source: Figure created by Madeleine Muller (2026).

FIGURE 3.3: The executive function of the brain and its impact on the emotions and behaviour of the trainer and/or trainee.

these barriers and find ways to recognise and celebrate the trainee. This requires deep reflection and an ability to understand and address one's own implicit biases when facing difficult relationships (Lusk 2023).

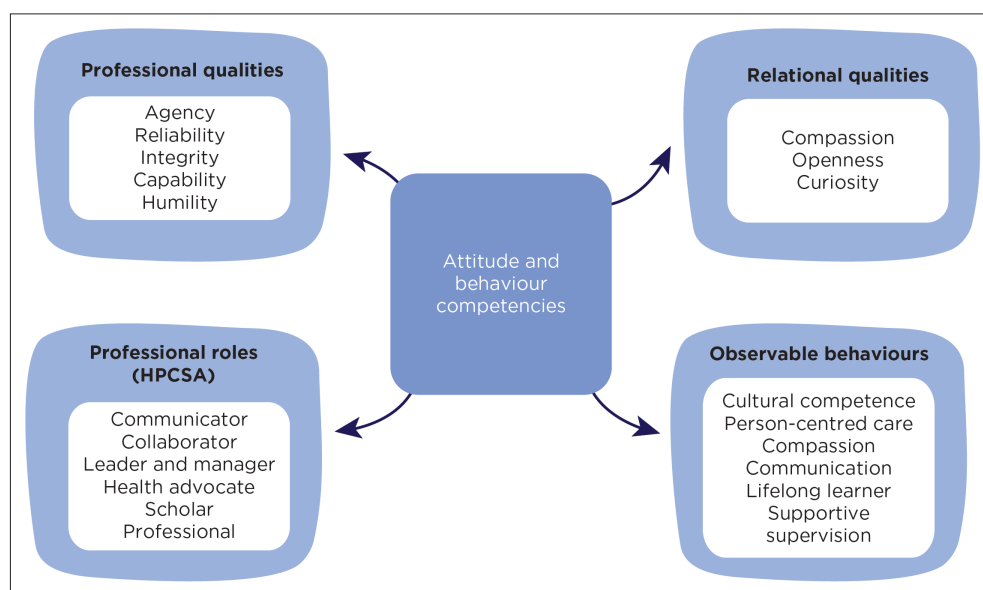
The second aspect is that of trust – being emotionally available, responsive and engaged with your trainee. Trust creates safety. Lusk (2023) describes two aspects of safety for the trainee: 'Educational safety' is an experience of being able to learn without fear of judgement, whereas 'dignity safety' refers to the trainee being able to take part in learning activities with a reasonable expectation that they will not be humiliated. Any behaviour where a supervisor humiliates, shames, criticises or diminishes a trainee will break such trust. The trainee needs to know that the supervisor can be relied upon and may be approached for help, no matter what the issue is. In such an environment of trust, feedback becomes a positive force within the supervisor–trainee relationship, enabling learning and development. However, this openness must be underpinned by clearly defined professional boundaries regarding acceptable behaviour, ethical conduct and clinical responsibility. Psychological safety does not imply the absence of standards; rather, it requires that expectations be made explicit and consistently upheld. In this way, trust is sustained not only through support and approachability but through accountability and a shared commitment to safe, professional practice.

For a supervisor to be able to consistently engage appropriately with a trainee, they need to be able to recognise and regulate their own emotions (Lusk 2023). Supervisors rarely humiliate trainees out of the belief that this

is the best way to train. It is more likely to arise from poorly regulated, negative emotions and impulsive unconscious behaviours. Exposure to a culture of using ‘negative consequences’ as a teaching methodology often leads to counterproductive teaching habits (Olasoji 2018). Learning how to stay calm and collected makes it possible to develop the humility, tolerance and generosity needed when interacting with a trainee.

■ Qualities of competent supervisor

An important aspect, over and above knowledge and skills, is the attitudes and behaviours as emphasised in the Health Professions Council of South Africa (HPCSA) core competencies. These include roles such as the professional, communicator, collaborator and health advocate – all of which require a foundation of ethical conduct, accountability, empathy and respect (Figure 3.4) (HPCSA 2014). Furthermore, we would expect supervisors to embody the same A-RICH qualities identified as important in our trainees – agency, reliability, integrity, capability and humility (Ten Cate & Chen 2020), as well as the compassion, openness and curiosity qualities outlined in Chapter 1. Embedding professional identity in values that recognise our interconnectedness and honour diversity and inclusivity creates a safe learning environment. These qualities are more likely to be



Source: Figure created by Madeleine Muller (2026).
Key: HPCSA, Health Professions Council of South Africa.

FIGURE 3.4: Attitude and behaviour competencies for the trainer and trainee.

available to the emotionally competent supervisor and translate into behaviours that foster trust, such as having an unconditionally positive regard for the trainee, high levels of self-awareness of their own bias and own positionality, communication skills that model empathy, person-centredness and the ability to have difficult conversations. The supervisor must not only be an expert in their field, but also culturally competent, psychosocially attuned and critically aware of the broader contextual and institutional factors that influence practice. This includes an understanding of, and respect for, institutional expectations and standards, recognising the implicit social contract between trainee, supervisor and training institution that underpins professional development, accountability and safe practice.

To shift the medical culture to a more appreciative and supportive environment will require role models (Lusk 2023) and leadership (Olasoji 2018). It has been shown that supervisors who have had training on socio-emotive skills are much more likely to model it in their teaching (Schwartz et al. 2022). A positive role model in a department, especially in higher positions of power, can have a powerful effect on how relationships are fostered and the dynamics within learning environments (Mills 2022).

The hidden curriculum can only be addressed if that which is unconscious is made conscious, and the drivers of poor behaviour are tackled head-on. This process is essential because the hidden curriculum profoundly influences how individuals interact within the clinical environment. Supervisor-trainee relationships often create a foundation for the social dynamics and organisational culture of the workplace.

■ Social dynamics of clinical workplace

Positive patient experiences are increasingly recognised as not merely technical achievements but deeply social outcomes, emerging from the quality of interactions, communication and trust within health care teams and institutions. These experiences are shaped not only by clinical decisions but by the relational fabric of the clinical workplace, which includes its cultures, hierarchies and social norms (Karande, Marraro & Spada 2021; Oben 2020).

As alluded to by an Ubuntu-inspired pedagogical approach, clinical learning and working environments are inherently social. Like a community centre or marketplace, it is a site of human connection where clinicians negotiate meaning, learn from each other and form bonds that underpin both learning and care. These environments are shaped by dynamic patterns of relationships, power, communication, culture and informal

learning, which influence how individuals work, learn and behave in real clinical settings. Within this space, patient safety and satisfaction are not isolated endpoints, but arise from collective competence, shared understanding and mutual accountability (Tsounis et al. 2022).

■ Work environment under threat

This relational aspect is embedded in the psychosocial work environment, which includes the social and emotional factors that affect how staff function. When under strain because of high workload, understaffing or poor communication, this environment can deteriorate, leading to burnout, medical errors and reduced quality of care. These pressures, compounded by clinicians' dual agency balancing service and training, may compromise WBAs, with time and convenience shaping interactions. This can result in tacit 'agreements' that prioritise ease over accuracy, undermining the credibility of feedback and entrustment decisions. Ubuntu proposes that the common experiences of these workplace challenges present deep opportunities for enhanced solidarity (Tutu 1999). Even in high-pressure health institutions, strong relational dynamics can act as a buffer, protecting team function and ensuring safer outcomes (Eklöf, Törner & Pousette 2014).

The everyday work of health care is emotionally and socially charged. It requires rapid decision-making, often under stress, across shifting teams. How clinicians communicate, share knowledge and support one another determines not only their performance but also whether risks are addressed or ignored. In such settings, emotional burden, trust and perceived safety are critical to individual and team resilience (Eklöf et al. 2014; Hauer et al. 2014).

■ Value of social capital

It is here that social capital becomes essential. Social capital refers to the relationships, norms and networks that facilitate cooperation and enable teams to function effectively. Drawing from the richness of Ubuntu that shaped indigenous African cultures in contexts of real resource constraints, there is a realisation that the very survival of individuals is dependent on the social capital provided by the collective, and that collective thriving is wholly dependent on the contributions of empowered individuals, both moral and material (Mbiti 1969). In the clinical workplace, three forms are especially relevant (Tsounis et al. 2022):

- Bonding social capital: strong ties within teams (e.g. among registrars)

- Bridging social capital: connections across groups (e.g. between departments or professions)
- Linking social capital: relationships that span hierarchies (e.g. between junior doctors and senior consultants).

These forms of social capital create the conditions for collaboration, open communication and learning. When present, they increase the likelihood that concerns will be voiced, that help will be sought, and that feedback will be received constructively (Karande et al. 2021; Pedersen et al. 2023). High social capital has been shown to enhance the quality of health care more effectively than simply reducing workload, reinforcing its value in clinical safety and sustainability (Pedersen et al. 2023).

■ Interplay between workplace-based assessment and social capital

When WBA is meaningfully implemented, it aligns powerfully with the mechanisms of social capital. While WBA structures opportunities for observation, supervision and feedback, it is social capital that makes these processes effective. Trusting relationships create the psychological safety required for open dialogue, vulnerability and reflection (Anastasiadis, Tsounis & Sarafis 2018; Hauer et al. 2014).

In this way, WBA becomes more than an assessment tool but a part of a complex social process. Its success depends on relationships between trainees and supervisors, within teams and across hierarchies. Through repeated, real-time observations, WBA allows supervisors to provide context-specific feedback, make nuanced entrustment decisions and identify registrars at risk, thereby improving both patient safety and trainee development (Baboolal & Singaram 2023; Castanelli et al. 2022).

■ Workplace-based assessment and safe learning environments

Critically, WBA contributes to building social capital by creating structured, safe encounters for performance conversations. When supported by trust and mutual respect, these moments reinforce a culture where learning from error is normalised rather than feared. Over time, this fosters a feedback-rich environment where clinical reasoning, communication and teamwork are continuously refined (Burch 2019).

This relational dimension of WBA is crucial for trainees. In high-trust environments, they feel psychologically safe to express uncertainty, reveal mistakes and ask for help. These behaviours are essential for learning and

for avoiding harm. Supervisors, in turn, become more effective educators when trainees trust them to be fair, kind and competent (Castanelli et al. 2022; Ten Cate 2006).

Trust develops through repeated, meaningful interactions, especially in moments of vulnerability. Whether during clinical crises or reflective debriefings, these shared experiences deepen professional bonds. Social capital, thus, enables the relational groundwork for safe practice and transformative learning (Daly 2024).

■ Synergy between workplace-based assessment, social capital and patient experience

By integrating WBA into a culture rich in social capital, institutions create a synergistic environment where WBA enables the mechanisms for feedback and learning, while social capital provides the relational safety for these mechanisms to function optimally. Together, they shape a clinical workplace where learning, teamwork and safety are mutually reinforcing (Anastasiadis et al. 2018; Tsounis et al. 2022).

In overburdened health care systems, this synergy becomes even more vital. When infrastructure is stretched and staff are fatigued, social capital sustains morale, encourages collaboration and prevents lapses in care. Social capital also anchors WBA within authentic relationships, ensuring that assessment is not perceived as surveillance but as support (Eklöf et al. 2014; Karande et al. 2021).

Ultimately, WBA and social capital act as safety interventions. They transform the workplace into a learning community where feedback is welcomed, care is shared and both patients and providers are protected. Recognising this synergy shifts the focus from individual performance to collective responsibility and relational competence as the foundation of high-quality, safe health care (Table 3.1).

TABLE 3.1: The synergy between workplace-based assessment, social capital and safety.

Mechanism	Workplace-based assessment contribution	Social capital contribution	Impact on the patient experience
Observation and feedback	Promotes timely correction of unsafe practices	Reinforces trust to give and receive feedback	Reduces preventable errors
Communication	Models clear, constructive workplace dialogue	Builds networks for open dialogue	Prevents miscommunication
Accountability	Encourages reflective practice and transparency	Cultivates mutual responsibility	Strengthens a just culture
Inclusivity	Exposes bias in feedback opportunities	Builds bridging capital across diverse teams	Reduces inequity and variability in care

Source: Table created by Sumaiya Adam (2026).

■ **Socio-economic and cultural context of workplace-based assessment in South Africa**

■ **Power dynamics between supervisor and trainee: Culture and identity**

Health professions education is embedded in, and shaped by, the social context in which it takes place and the power relations between the supervisor and the trainee. Student movements in South Africa (SA) have demonstrated that the social space and interpersonal relations are vulnerable to dysfunction, and the clinical training space is not immune to this (Bagwandeen & Singaram 2018).

Issues of discrimination, barriers related to racism, sexism and favouritism have also been highlighted as having adverse effects on specialist training. Relationships between the trainees and the supervisors that involve differing levels of empathy, trust and respect become essential (Khine & Hartman 2018). Consequently, when considering the timing and manner of teaching and learning in the workplace, these elements affect the calibre of feedback that trainees receive and may make it challenging for them to ask for it because they feel uncomfortable or unsafe in the learning environment.

The socio-political history of SA has contributed significantly to the exclusion of multilingualism. For many years, English and Afrikaans were the official languages in SA, resulting in the neglect of the indigenous languages, and this has a bearing on effective learning (Meier & Hartell 2009). During apartheid, SA discriminated and marginalised people of colour through prescribed policies, which were also upheld by higher education institutions, including medical schools (Digby 2013). Language is a key factor in the effectiveness of medical education. As the primary medium of instruction, language shapes how medical knowledge is conveyed – whether through textbooks, lectures or clinical interactions with patients. It is a vital learning tool that facilitates comprehension, academic performance and professional communication. Therefore, the choice of language in medical education profoundly influences the quality of learning outcomes and the preparedness of health care providers for real-world practice (Hamad et al. 2025).

While many trainees demonstrate functional proficiency in the language of instruction, the complexity of clinical communication and learning requires ongoing sensitivity to linguistic nuance, inclusivity and the diverse realities that shape participation in the clinical environment. Accordingly, the increasing diversity in educational institutions necessitates that

educationalists teach and manage trainees with cultures, languages and backgrounds that are unknown to them. To engage with this diversity effectively, educators must recognise the validity of differences as this may have positively or negatively influenced learning processes, particularly in the context of WBA (Meier & Hartell 2009). A community of practice, described by Lave and Wenger (1991), outlines the roles of the fully fledged members of the community of practice: the supervisors, in making or providing a socially situated journey for the legitimate peripheral participants, and trainees in this case, who aspire to acquire the identity shared by other members of the community and become full members of their chosen professions, immersing themselves in the same community of practice.

■ Resource constraints

Health professions education in SA, particularly the clinical skills training, is greatly dependent on the public health institutions, ranging from primary health care facilities to more specialised central hospitals, that are faced with a series of challenges, such as the lack of human resources, equipment, infrastructure and critical consumables. Systemic barriers and enablers impact these resource-constrained environments in which supervisors operate (Ras et al. 2023).

There is an unequal distribution and access to the required training resources (infrastructure and equipment) by trainees across the different health care facilities and universities in SA. Training across provinces continues to be affected by the historical legacy of health service centralisation in urban centres, where historically disadvantaged health departments serving previously disadvantaged communities were systematically underfunded and inequitably resourced (Singh, Govender & Reddy 2005). This strain is further increased by macro- and socioeconomic issues such as the sluggish post-apartheid reform of the segregated health care system and the rise in migration and urbanisation (Mayosi et al. 2012). The historically advantaged institutions remain well-resourced compared to the historically disadvantaged institutions, and yet the implementation of WBA is expected to follow a standardised approach. An entrustable professional activity (EPA) that requires advanced technology to which one or more training institutions lack access or cannot afford, places those institutions, and their trainees, at a disadvantage.

Trainees are trained by qualified health care practitioners (specialists and non-specialists) who are mostly jointly appointed by the university and the provincial government and are responsible for service delivery, while also being responsible for teaching both undergraduate and postgraduate programmes using the public health training platforms for

the academic institutions. Heavy clinical workloads, often combined with scarce resources (supervisors and clinicians), impact the supervisor-to-trainee ratio and conspire to compromise the implementation and quality of WBA. This is often compounded by infrastructural and consumable deficiencies needed for adequate health care delivery (Ras et al. 2023). Chapters 7 and 8 further unpack the need for resources for the implementation of WBA as they deal with details such as technological modalities that are key in data management for WBA.

Time is also often cited as one of the impediments to the successful implementation of WBA. Workplace-based assessment detractors frequently point out that it requires a significant time commitment, which raises expenses and increases the administrative load in an already taxing workplace (Nel et al. 2024). The claim of time restrictions may be lessened by routinely using WBAs within the organised framework of EPAs, which has been shown to be time-efficient (Cheung et al. 2022; Nel et al. 2024). To address these potential impediments, an increased investment in resources and faculty development to ensure comprehensive training of supervisors is critical for the implementation of WBA.

■ Conclusion

This chapter's emphasis on identity formation, emotional competence and the socio-relational fabric of clinical workplaces finds strong resonance in the overarching theme of an Ubuntu-inspired pedagogy and within the broader discussion of workplace learning presented in Chapter 6. While the focus has been on how identity is shaped through power dynamics, trust and cultural context, these same interpersonal and systemic forces underpin how learning unfolds through feedback and reflection. Chapter 6 builds on these themes by situating identity work within structured educational mechanisms like WBAs and EPAs, offering a practical framework for how trainees navigate and influence their learning environment. Together, these chapters reinforce the notion that medical education is not only about what is taught or assessed, but about who trainees become, how they are supported and the quality of human relationships that surround their development.

Practice points

- Foster emotionally competent supervision.
- Build trust and psychological safety.
- Address the hidden curriculum.

- Support equitable identity formation.
- Use workplace-based assessment as a social and cultural practice.
- Leverage social capital in the workplace.
- Be mindful of contextual realities.

■ Declarations

■ Ethical considerations

This chapter did not require ethical clearance or consent as it synthesises existing literature and does not present primary research.

■ Authors' contributions

Veena S Singaram: Conceptualisation, Writing – original draft, Writing – review & editing.

Madeleine Muller: Conceptualisation, Writing – original draft, Writing – review & editing.

Sumaiya Adam: Conceptualisation, Writing – original draft, Writing – review & editing.

Thakadu Mamashela: Conceptualisation, Writing – original draft, Writing – review & editing.

All authors reviewed the chapter, contributed to the discussion of results, approved the final version for submission and publication, and take responsibility for the integrity of its findings.

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■ Appendix 1

■ How to manage strong emotions in the workplace

□ Emotional insight

All clinicians need to be aware of how stress triggers specific challenging emotions (biological impulses): fear, rage and distress. Emotions are useful to help identify potential threats but are limited in their ability to understand and manage complex emotions. Specific behaviours, driven by emotion, are triggered as strategies to manage stressful situations, but may be counterproductive. This can include criticising, manipulating, preaching, pleasing, perfectionism, worrying, avoiding, self-pitying and distracting (e.g. substance use).

TASK: Create opportunities for clinicians to receive education and to self-reflect on their emotions and counterproductive behaviours in the workplace.

□ Emotional awareness

Emotions are powerful subconscious impulses that may be triggered by external events or internal processes (such as particular thoughts) and can produce strong experiences and behaviours even before full cognition takes place. These can be modified, but only if the person becomes aware of them as they arise. As human beings, we have the ability to reflect and to ‘think about our thinking’ and observe our inner world.

TASK: To increase awareness of emotions as they arise

Phase 1: Use journaling at the end of each day to reflect on different emotions, how they were triggered and the resultant behaviours and consequences.

Phase 2: You can also track your feelings during the day using apps or other tools to become more aware of emotional changes in real time.

□ Emotional regulation

Emotions always have a strong endocrinological component, with stress hormones such as adrenaline usually present when in a state of fear, rage or distress. These states are unpleasant, and there is a wide range of strategies one can engage in to manage these. One set of strategies will engage the counterproductive behaviours highlighted above. Although it can mitigate the negative experience of the emotion, it often

worsens a situation and creates further stress. A key strategy is to first manage the biological stress feedback loop to manage stress hormone levels, with increased muscle tension and vigilant thinking as possible intervention points.

TASK: To regulate strong emotions as they arise

Option 1: Learn/practice bodily techniques to relax the muscular system, e.g. yoga, relaxation exercises, physical exercise.

Option 2: Interrupt negative thinking: Mindfulness provides a powerful tool to focus attention on sensory impressions in the present moment and mitigate the effect of ongoing vigilant thoughts. There is a range of apps and books available on useful mindfulness exercises.

awareness of emotions as they arise

Phase 1: Use journaling at the end of each day to reflect on different emotions, how they were triggered, and the resultant behaviours.

Phase 2: Use an app during the day to check on fluctuating emotions in real time

□ Advanced emotional competence

All clinicians have a range of effective emotional regulation skills. Emotional competence speaks to the ability to apply these skills consistently in high-pressure, emotionally laden interactions. There is still a lack of knowledge on how to best support the development of the advanced skills required by clinicians. Ongoing reflection and journaling may be of assistance. Advanced skills will include actively promoting emotions of *care* (nurturing others), *play* (the joy of interaction) and *seeking* (learning and problem solving) in the workplace.

□ Reading list

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■ Appendix 2

■ Practical tips from the chapter

□ Foster emotionally competent supervision

- Recognise and regulate your own emotional triggers before engaging with trainees.
- Shift from reactive ‘survival mode’ (e.g. fear, rage) to calm, reflective ‘executive mode’ that supports care, curiosity and play.
- Model empathy, humility, patience and affirmation during teaching and feedback encounters.

□ Build trust and psychological safety

- Create an environment of educational safety (learning without fear of judgement) and dignity safety (freedom from humiliation).
- Respond to trainee vulnerability with kindness and constructive feedback.
- Demonstrate that it is safe to ask questions, admit mistakes and seek help.

□ Address the hidden curriculum

- Challenge toxic norms (e.g. glorifying overwork, shaming trainees) by openly naming and discussing them.
- Promote respectful, humane behaviours in clinical spaces as central to education – not peripheral.
- Be a role model for inclusive, emotionally supportive practices.

□ Support equitable identity formation

- Recognise that trainees come with diverse identities shaped by race, gender, socioeconomic status and language.
- Avoid assuming a one-size-fits-all model of what a ‘good doctor’ looks like.
- Use feedback and assessment to validate both competence and personal authenticity.

□ Use workplace-based assessment as a social and cultural practice

- Don’t treat WBA as just a checklist – use it as a tool for relational learning and reflection.

- Incorporate direct observation, timely feedback and joint reflection into routine supervision.
- Use WBA moments to build trust, reinforce team cohesion and model collaborative care.

□ Leverage social capital in the workplace

- Strengthen bonding capital within units (e.g. peer support among trainees), bridging capital across teams and linking capital across hierarchies.
- Encourage team debriefs, cross-disciplinary conversations and shared reflection to build relational depth.
- Promote shared responsibility and mutual respect to improve communication and reduce errors.

□ Be mindful of contextual realities

- Acknowledge and adapt to resource constraints in South African clinical settings – time, staff, infrastructure.
- Balance service delivery and education by integrating WBA into existing workflows.
- Embrace multilingualism and cultural humility as assets in clinical education.

Entrustable professional activities: Observations that measure trust

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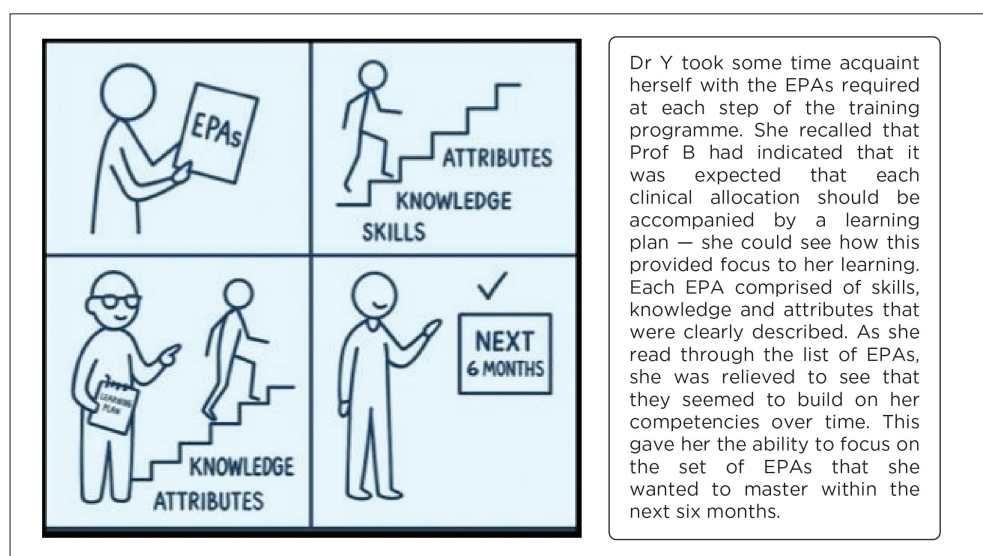
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■ Abstract

Entrustable professional activities (EPAs) offer a practical framework to operationalise workplace-based assessment (WBA) in competency-based medical education (CBME). Rooted in real-world clinical practice, EPAs define the essential units of work of a 'day-one' graduate and provide a structured means of assessing readiness for unsupervised practice. This chapter outlines a step-by-step approach to developing EPAs within the South African context, aligning them with local health priorities, resource constraints and the realities of diverse training platforms.

The framework supports the translation of complex competencies into observable, assessable units of work that reflect the day-to-day responsibilities of specialists. Entrustable professional activities are categorised as core implementable, core aspirational or elective, allowing flexibility to accommodate systemic limitations while promoting excellence and lifelong learning. A nationally adapted version of the EPA template guides the construction of discipline-specific EPAs and ensures relevance and consistency across institutions.

The chapter also highlights common pitfalls in EPA development and implementation, and presents strategies for alignment with curricula, electronic portfolios of learning (ePoLs) and assessment systems. Through consensus-driven development, pilot testing and structured implementation, EPAs support trust-based decision-making, foster trainee progression and enhance accountability.



Source: Figure created by Sumaiya Adam (2026).

Key: EPA, entrustable professional activity.

FIGURE 4.1: Dr Y learns about entrustable professional activities.

Faculty development and curriculum alignment are essential for sustainable implementation. Ultimately, EPAs create a shared language between supervisors and trainees, reinforcing transparency and patient safety. This chapter aims to support medical educators and programme leaders in using EPAs as a transformative framework for practical, fair and meaningful WBA in South Africa's medical specialist training landscape.

■ Introduction

Entrustable professional activities (EPAs) have emerged as a practical framework to operationalise workplace-based assessment (WBA) in health professions education (HPE). By defining key activities that a trainee should be able to perform with increasing levels of independence, EPAs link everyday clinical work with assessment in a structured, meaningful way, ensuring that assessment remains relevant to patient care and health system needs while supporting trainee progression (Ten Cate & Taylor 2020).

Building on this, the chapter offers a practical, step-by-step guide to constructing EPAs using a well-established template, adapted for the realities of South African training environments. It shows how to translate the often unspoken 'day job' of a fit-for-purpose graduate into clear, assessable activities that align with patient safety, local health needs and the contexts in which care is delivered. By walking readers through the iterative processes of collaborative development, careful refinement and pilot testing, the chapter aims to support educators and curriculum teams in building EPA frameworks that are both meaningful and manageable. Thus, ultimately strengthening WBA and supporting trainees as they grow in independence and confidence in their professional roles (Ten Cate & Taylor 2020).

■ From theory to workplace reality

Competency-based medical education (CBME) has challenged traditional health professions training, which relied on time-based exposure, by shifting to a commitment to demonstrable competence within authentic clinical environments. Traditional training models assumed that spending sufficient time working in clinical spaces would translate into readiness for practice. This assumption does not account for the complex, unpredictable nature of real-world patient care or the variability in trainee needs. It also does not take into consideration the accountability of the supervisor for a specific end result (Ten Cate 2005; Ten Cate & Scheele 2007).

Competency-based medical education focuses on the workplace-based outcomes of training, rather than relying solely on theoretical knowledge

assessed in controlled environments. This ensures that graduates can competently perform the activities required in the workplace. In many postgraduate programmes, assessment remains heavily reliant on summative examinations. These may not fully capture the integration of competencies required in patient care (Ten Cate 2005; Ten Cate & Scheele 2007).

Workplace-based assessment addresses this gap by integrating assessment within the daily practice of patient care. It complements summative examinations by providing multiple low-stakes, ad hoc and ongoing opportunities for observation, allowing for continuous assessment and feedback. This allows for real-time observation of how trainees apply their knowledge, skills, clinical reasoning and professionalism in contexts where patient outcomes and safety are at stake. This aligns with the mandates of the South African Committee of Medical Deans (SACOMD) and the Colleges of Medicine of South Africa (CMSA), which advocate for graduates who are prepared for independent practice (Ras et al. 2024).

South Africa's shift towards CBME underscores a commitment to producing health professionals whose training is aligned and responsive to the country's health care needs and who are prepared for independent practice. This shift also recognises the limitations of time-based training, emphasising the importance of readiness for practice, based on demonstrated competence.

■ Need for common framework

To ensure consistency and fairness in the assessment of individual trainees across training sites, a consensus-driven national or institutional framework for WBA is needed. Entrustable professional activities provide this foundational framework by defining the key clinical units of work that a trainee must be able to perform independently by the end of training, along with the expected levels of entrustment at various stages of progression (Ten Cate 2013).

By using EPAs, training programmes can clearly articulate expected competencies, set milestones for progression and provide a structured basis for entrustment decisions. This supports the portability of training and ensures that assessments are fair and transparent, regardless of the clinical setting in which they occur (Jenkins et al. 2023; Ten Cate & Taylor 2020).

A structured framework also underpins the trust that is central to WBA. When supervisors and trainees share a clear understanding of expectations, it becomes possible to make decisions about entrustment based on evidence and consistent criteria, thus aligning educational objectives with patient care and safety.

■ Entrustable professional activities as unit of work

Entrustable professional activities are essentially a description of the 'day job', representing meaningful and routine activities that reflect what patients and health care systems require from health care professionals. Each EPA combines multiple domains of competence and requires the demonstration of clinical reasoning, professional judgement and appropriate behaviours within authentic patient care contexts (Hennus et al. 2022, 2023). In doing so, EPAs offer a holistic and integrated approach to evaluating readiness for practice. Entrustable professional activities help to shift the assessment focus from fragmented checklists and isolated knowledge checks to integrated, activity-based evaluations embedded in authentic clinical work. Entrustable professional activities also allow trainees to have their contributions formally recognised, with these activities systematically assessed and tracked to guide learning, feedback and progression towards unsupervised practice (Ten Cate et al. 2024).

■ Entrustable professional activities as unit of education

Entrustable professional activities offer a structured solution to operationalise CBME and WBA. They link curricula with the realities of daily clinical practice by translating complex competencies, for example, Health Professions Council of South Africa (HPCSA) competencies and expected learning objectives, into observable and assessable clinical activities which are aligned with routine professional responsibilities (Jenkins et al. 2023; Punchoo & Pillay 2025).

An entrustable professional activities-based curriculum ensures that learning objectives, clinical teaching and workplace experiences are explicitly aligned with EPAs. These EPAs can be mapped to exit certification examination blueprints and form the foundation for structured electronic portfolios of learning (ePoLs) that support documentation, feedback and reflective practice. For coherence and consistency, summative assessments and training logbooks should also be aligned with EPAs to enable effective monitoring of trainee progression, guide supervision and inform decisions about readiness for independent practice (Boyce et al. 2011; Mulder et al. 2010). In many low- and middle-income settings, including South Africa, medical specialist training occurs across diverse clinical platforms ranging from tertiary centres to district and rural hospitals. It is here that Ubuntu plays a significant role in promoting the pursuit of equity as an indicator of excellence in this unequal context. Entrustable professional activities

frameworks must therefore remain adaptable to these varied contexts while maintaining national standards for competence and patient safety (Erumeda, Jenkins & George 2022).

■ Entrustable professional activities as unit of trust

An entrustable professional activities-based approach to training strengthens the foundation of trust by clearly articulating what is expected of trainees at each stage of training. This transparency supports accountability, fosters self-directed learning and builds confidence between trainees and supervisors. Specific EPAs during WBA help trainees understand their current level of performance and identify the steps required to progress towards greater autonomy. For supervisors, EPAs offer a shared language and framework for observation and documentation, enabling consistent and defensible entrustment decisions based on observed competence and context. To uphold trust and coherence across varied training environments, ranging from urban academic centres to rural health platforms, EPA frameworks must be developed collaboratively across institutions. Achieving national consensus ensures collective ownership, promotes alignment of assessment practices and facilitates implementation while remaining flexible enough to accommodate local realities (Hennus et al. 2023; Ten Cate 2013; Ten Cate & Taylor 2020).

In the South African context, trust within clinical training relationships is closely aligned with the philosophy of Ubuntu, which emphasises interconnectedness, mutual respect and shared responsibility within the health care community (Matahela & Ngwenya 2025). As discussed in Chapter 3, competence in clinical practice is demonstrated not only through technical skill but also through relational engagement with patients, colleagues and communities. Entrustment decisions therefore extend beyond technical competence to include relational and professional attributes expressed within the supervisor-trainee-patient relationship.

Entrustable professional activities provide a practical mechanism through which these dimensions of professional practice can be observed and discussed within authentic workplace settings. Evidence from South African primary health care settings further illustrates the importance of relational competencies in clinical care, where respectful communication, collaboration with caregivers and professional attitudes have been identified as key facilitators of Ubuntu-based care (Meno, Mulaudzi & Sepeng 2025). These insights reinforce the need for assessment frameworks such as EPAs to consider both technical capability and relational accountability when evaluating professional competence.

■ Categorisation of entrustable professional activities in training programmes

Entrustable professional activities within training programmes may be categorised to structure learning and guide progression (Table 4.1). Defined EPAs represent the core professional activities essential for the day-to-day responsibilities of a competent graduate entering independent practice. However, not all EPAs can be uniformly achieved by every trainee nationally because of contextual challenges such as variability in clinical exposure across training platforms, resource constraints, differences in regional disease burden and disparities in supervision and infrastructure throughout the country.

To address these challenges while still upholding standards of training, EPAs are divided into two categories: core and elective. While core EPAs represent activities essential for independent specialist practice, elective EPAs allow for enrichment and advanced development for high-performing trainees. Core EPAs can be further subdivided into implementable and aspirational depending on available resources and feasibility (Table 4.1) (Jacobs et al. 2023; Young et al. 2018).

TABLE 4.1: Categorising entrustable professional activities in the training programme.

Type of EPA	Description	Example: Obstetric ultrasound in training for Obstetrics and Gynaecology
Core EPAs: Implementable	These are the essential professional activities that reflect the day-to-day responsibilities of the discipline. They are feasible to achieve at all accredited training sites and must be completed by all trainees prior to the completion of training. These EPAs represent the minimum criteria for safe, independent and competent practice and are therefore non-negotiable across all institutions.	<i>Perform and interpret a routine second-trimester foetal anomaly scan.</i> This EPA represents a fundamental responsibility of a generalist obstetrician. It includes the ability to perform a structured anomaly scan according to national protocols, identify common foetal anomalies, document findings appropriately and communicate results effectively. This skill is essential to safe and competent practice and must be achieved by all trainees at every training site.
Core EPAs: Aspirational	These EPAs are integral to the discipline's scope but may not be consistently achievable at all training institutions because of limitations such as resource availability, local service configuration or insufficient clinical exposure. While not currently implementable across all training sites, they are important for future-proofing the training programme. A national task team should determine a timeline and strategy for supporting the transition of aspirational core EPAs into implementable core EPAs to ensure equitable training opportunities over time.	<i>Assess the foetal heart during obstetric ultrasound and recognise abnormalities requiring referral.</i> While foetal echocardiography is important for the assessment of high-risk pregnancies, its widespread implementation across all training sites is currently limited by supervisory capacity, equipment availability and variable case exposure. It remains aspirational but forms an important target for future implementation planning by national training bodies.

Table 4.1 continues on the next page→

TABLE 4.1: (cont.): Categorising entrustable professional activities in the training programme.

Type of EPA	Description	Example: Obstetric ultrasound in training for Obstetrics and Gynaecology
Elective EPAs	These are advanced, subspecialty-specific or niche professional activities that go beyond the essential scope of general training. They are intended for high-performing trainees who have achieved a sufficient level of entrustment in the core EPAs. Elective EPAs offer opportunities for further development aligned with individual interests, emerging health system needs or academic and subspecialty career trajectories.	<i>Perform and interpret a foetal neurosonogram.</i> This is a highly specialised skill typically undertaken within the domain of MFM subspecialty training. While not required for generalist practice, high-performing trainees with an interest in advanced foetal imaging or MFM may pursue this elective EPA for enrichment and to support career development in subspecialised areas.

Source: Table created by Sumaiya Adam (2026).
Key: EPA, entrustable professional activity; MFM, Maternal-Foetal Medicine.

■ Framework to construct an entrustable professional activity

As South Africa strengthens WBA in medical specialist training, clear and practical frameworks are essential to guide the development and implementation of EPAs. One such framework, which has gained international recognition, is the EPA template developed by Professor Olle Ten Cate (Ten Cate & Taylor 2020). This template offers a structured and practical method for translating competencies into units of professional practice, which can be directly assessed in the workplace. By grounding assessments in real-world clinical activities, it deconstructs complex professional roles into clearly defined, specific and observable units of work that can be progressively entrusted to trainees. A key strength of this approach is its alignment with the realities of everyday clinical practice, ensuring that assessments remain both relevant and meaningful while upholding accountability and patient safety. It also enhances clarity for both supervisors and trainees by specifying expected levels of supervision and the conditions required for entrustment, thereby supporting consistent assessment, constructive feedback and guided progression across diverse training settings (Hennus et al. 2022). The template has been adapted to ensure relevance within the South African context, providing a systematic and disciplined approach to constructing EPAs.

Using the template provides a structured approach to developing EPAs by using eight headings: (1) concise title; (2) specifications and limitations; (3) potential risks in case of failure; (4) relevant competency domains; (5) the required knowledge, skills, attitudes and experiences; (6) information sources for assessment; (7) supervision levels; and (8) the retraining requirements if the EPA is not practised regularly (Table 4.2) (Ten Cate & Taylor 2020).

TABLE 4.2: The entrustable professional activity construction template.

Component	Description
1. Title	Concise, recognisable description of the professional units of work or bundle of units of work
2. Specification and limitations	Explicitly delineate scope, context, boundaries and exclusions to avoid ambiguity
3. Risks in case of failure	Identify potential patient safety, legal or organisational risks associated with failure in the activity
4. Relevant competency domains	Map the EPA to associated competencies (e.g. HPCSA competencies) to clarify which domains are integrated
5. Required knowledge, skills, attitudes and experiences	Define explicit entry-level requirements, including procedural skills, clinical reasoning and professional behaviours and where trainees will obtain experience (e.g. specific rotations)
6. Information sources for assessment and entrustment decisions	Specify data sources (e.g. direct observations of procedures or consultations, multisource feedback, entrustment-based discussions, product evaluations) captured in a portfolio to support formative and summative entrustment decisions
7. Expected entrustment and/or supervision levels at training stages	Describe the progression from direct supervision to indirect or unsupervised practice aligned with the trainee stage
8. Expiration and/or retirement date if not practised	Set a time limit after which retraining or reassessment is needed if the EPA hasn't been performed for a while

Source: Sumaiya Adam's own work, adapted from Ten Cate and Taylor (2020).

Key: EPA, entrustable professional activity; HPCSA, Health Professions Council of South Africa.

To ensure local relevance, each discipline-specific EPA framework should be adapted from the generic template to address:

- Local burden of disease, nationally and regionally
- Patient safety in high-risk environments, such as maternal-foetal care, sepsis management and trauma care
- Linguistic competency, cultural sensitivity and medico-legal awareness within South African health care contexts
- Cross-disciplinary realities, including co-management with nurses and clinical associates, and supervision structures that may include laboratory managers or non-specialist medical practitioners.

These contextual considerations are particularly important in countries with diverse health system realities. Aligning EPAs with local disease burden, service delivery models and workforce needs ensures that training programmes produce graduates who are prepared to respond effectively to the health priorities of the populations they serve.

■ Entrustable professional activity development process

Each discipline should define its own framework of approximately 4–5 EPAs per training year (usually not more than ~20–30 EPAs for a training programme) that describe the 'day job' of a fit-for-purpose graduate, capturing the essential, routine units of work that align with national and

regional health system needs. This framework must be developed through consensus within a representative community of practice drawn from all training institutions, to ensure shared ownership and practical relevance (Figure 4.2) (Hennus et al. 2023; Jenkins et al. 2023; Punchoo & Pillay 2025).

The entrustable professional activity development process begins with the formation of a core national team, which is responsible for leading a structured, consensus-driven approach. One of the team's first tasks is to identify the key clinical activities that constitute the 'day job' of a graduating trainee; those activities that are essential for safe and competent independent practice upon completion of training. These activities form the basis for defining EPAs (Hennus et al. 2023).

A practical approach to constructing an EPA is for the national core development team to begin by focusing on points (1) title, (2) specification and limitations, and (5) required knowledge, skills, attitudes and experiences of the EPA template (Table 4.2). Achieving consensus on these three aspects is essential, as they form the overriding 'mental model' of the EPA, ensuring shared clarity on the purpose, scope and competencies embedded within the activity (Hennus et al. 2023; Ten Cate & Taylor 2020). Once this mental model is agreed upon, the team can systematically work through the remaining points of the template to refine the EPA, ensuring that it is practical, observable, assessable and aligned with WBA goals.

It is important to acknowledge, however, that not every competency, skill or clinical condition needs to be captured within an EPA. Entrustable professional activities are not intended to cover every aspect of the curriculum; rather, they highlight critical units of professional work that require the integration of knowledge, skills and professional judgement. To maintain clarity and usability, EPA descriptions should remain concise and focused, ideally limited to two to three pages. Detailed explanations of broader professional attributes, such as those described in the agency, reliability, integrity, capability and humility (A-RICH) framework, can be included in an annexure. Similarly, detailed curriculum content may be placed in annexes to provide learners with guidance on the breadth and scope of the discipline while keeping the core EPA descriptions streamlined and practical for use in the workplace.

Many foundational competencies and more narrowly focused activities can be assessed through other methods, and some will continue to develop beyond the training programme as part of a lifelong learning journey. Trainees may therefore be entrusted with core EPAs and allowed to progress, even if they have not yet demonstrated every specific skill or encountered every clinical scenario, particularly those that are rare, context-dependent or better suited to advanced practice (Hennus et al. 2023; Ten Cate & Taylor 2020).

7 STEPS FOR EPA DEVELOPMENT



Source: Figure created by Sumaiya Adam, adapted from Hennus et al. (2023).
Key: EPA, entrustable professional activity.

FIGURE 4.2: Entrustable professional activity development cycle: team, design and implementation.

This approach ensures that EPAs serve as a meaningful bridge between the curriculum and the realities of clinical practice. Entrustable professional activities should be carefully mapped to curriculum outcomes, ensuring alignment with expected competencies while avoiding unnecessary duplication or over-assessment. By focusing on authentic clinical activities that matter most, EPAs support integrated learning, guide supervisory decisions and promote accountability, while allowing flexibility for individual growth.

These identified key clinical activities are then used to draft the structured EPAs. Broader stakeholder consensus beyond the core national team is then sought on the draft EPAs. Subsequent pilot testing of the drafted EPAs within training sites is essential to assess their feasibility and to provide an opportunity for refinement before formal implementation. This ensures that the final EPAs are practical, assessable, achievable and aligned with the needs of both trainees and the health system (Figure 4.2) (Hennus et al. 2023).

■ Common pitfalls in entrustable professional activity development

While the value of EPAs is clear, several common pitfalls can impede effective development. One significant challenge is the creation of too many EPAs, which can overwhelm both supervisors and trainees, leading to excessive administrative burdens and reduced engagement. Frameworks should focus on essential activities and consider nesting sub-units within broader EPAs for manageability. Vague definitions and unclear expectations can lead to inconsistent assessments, making it essential to use structured tools, such as the recommended template, to ensure clarity and the EQual tool for quality assurance (Taylor et al. 2017). Engaging a broad range of stakeholders throughout development and piloting stages ensures the relevance and practicality of the EPAs. Excluding stakeholders from the development process can result in frameworks that are misaligned with clinical realities, thereby fostering resistance to adoption (Jenkins et al. 2023).

Furthermore, variations in supervisory experience, competing clinical demands and resource constraints across training platforms may influence opportunities for observation and feedback – for example, when limited supervisor availability or heavy service pressures reduce time for structured observation. These contextual realities, highlighted earlier in the book, underscore the importance of faculty development, shared and calibrated mental models of competence and supportive systems for implementing EPA-based assessment.

■ Entrustable professional activities implementation process

The implementation of EPAs within training programmes provides the framework for practical, sustainable WBA. It needs careful planning, stakeholder engagement and alignment with existing workflows to ensure seamless integration. Successful implementation of EPAs requires consensus-building within disciplines, both at the departmental and at the national levels. At the national level, forming discipline-specific working groups helps to ensure the alignment of EPA frameworks with the universities' and CMSA requirements as well as training programme objectives, while adapting to contextual needs. This involves reviewing and contextualising international models, consulting widely with stakeholders and developing guidelines for assessment, supervision and progression decisions (Hennus et al. 2023).

Programmes should begin by mapping EPAs to current training activities or rotations to identify redundancies and to address gaps. Integration into existing learning plans for the rotation, linkage to logbooks and the use of ePoLs for structured, real-time documentation will facilitate the systematic tracking of progress and the timely provision and documentation of feedback. Implementation should be phased, starting with pilot projects in as many sites as possible to test feasibility and to gather structured feedback. Refinements based on these pilots will support broader implementation across programmes, ensuring that EPAs reinforce trust by providing evidence-based, transparent processes for entrustment decisions and progression towards independent practice (Hennus et al. 2023; Ten Cate et al. 2024).

At the departmental level, faculty development will help to clarify the expectations of supervisors and to identify gaps that need to be addressed in support of the practical implementation of EPAs. Faculty development is essential to ensure that supervisors are equipped with the skills to observe, assess and provide constructive feedback, which aligns with EPA expectations (Hennus et al. 2023). For trainees, clear communication regarding expectations and progression supports self-directed learning and engagement. Regular discussions with all stakeholders within departments foster consistency in how EPAs are assessed and how entrustment decisions are made. Piloting WBA, especially within specific EPA frameworks by departments and collecting feedback from end-users, promotes a sense of ownership and supports sustainable implementation (Hennus et al. 2023).

■ Common pitfalls in entrustable professional activities implementation

The successful implementation of EPAs requires a thoughtful and phased change management process that engages both trainees and supervisors

from the outset. Onboarding of stakeholders plays a critical role in early clarification of expectations, ensuring that trainees understand what is required of them at each stage of training, while supervisors develop a shared sense of responsibility in observation, feedback and entrustment decisions.

A key early step involves mapping EPAs to the actual clinical training platform. Identifying which rotations, experiences or clinical opportunities best support the acquisition of each EPA helps to align the curriculum with workplace realities. This alignment ensures that trainees are exposed to the right contexts to demonstrate and grow their competence, rather than viewing EPAs as abstract or disconnected requirements.

Faculty development is central to this process. Supervisors must not only understand how to use EPAs in day-to-day clinical supervision but also appreciate how EPAs function as a broader WBA framework. This means building a common understanding of how EPAs tie into the overall curriculum, influence progression decisions and contribute to summative assessments. Without this foundational knowledge, the use of EPAs risks becoming superficial.

Furthermore, if EPAs are reduced to simple checklists rather than being used as tools for feedback, reflection and professional growth, their educational value is significantly diminished. This checklist mentality can undermine both learning and trust in the system. Similarly, implementing EPAs without adapting them to the specific contexts of training sites, particularly in resource-constrained or rural settings, can limit their relevance and uptake.

Perhaps most critically, premature implementation without meeting the necessary conditions, such as adequate supervisor training, curriculum alignment, institutional support and trainee preparation, can result in disengagement and missed opportunities for meaningful feedback and development. Therefore, careful planning, piloting and refinement are essential. Change must be managed deliberately, with an emphasis on collaboration, contextualisation and capacity building at every step (Hennus et al. 2023).

■ Conclusion

In conclusion, this chapter focuses on EPAs as the cornerstone of a structured framework for WBA. By translating complex competencies into observable and assessable units of work in real clinical settings, EPAs offer a transparent and trustworthy approach to assessment. They help trainees understand expectations and foster trust in the process, while enabling supervisors to make consistent, informed entrustment decisions through

repeated observation and meaningful feedback. Underpinning this framework are the complex relationships necessary for successful implementation, as discussed in Chapters 3 and 5. The effective use of EPAs should also be viewed in relation to entrustment decisions (Chapter 5), supporting information systems (Chapter 7) and the role of competency committees (Chapter 8), all of which contribute to ensuring that readiness for independent practice is assessed responsibly and reliably.

Importantly, the framework presented in this chapter is grounded in the South African context and inspired by Ubuntu in pursuing equity across distributed training platforms and dealing with the realities of resource-constrained health care systems. By integrating these contextual considerations with internationally recognised approaches to EPAs and WBA, this framework offers insights that may be relevant to other countries across the Global South seeking to strengthen competency-based training and assessment.

Practice points

- Use EPAs to translate complex competencies into observable clinical tasks that reflect real-world responsibilities, enabling meaningful WBA.
- Engage stakeholders early in the EPA development process to ensure the framework is practical, relevant and aligned with national training goals and local health system realities.
- Categorise EPAs as core or elective to balance standardisation with flexibility, ensuring feasibility across diverse training platforms.
- Map EPAs to existing rotations, logbooks and ePoLs to streamline documentation, support structured feedback and guide progression decisions.
- Invest in faculty development and change management to build a shared understanding of EPA principles and to avoid pitfalls such as checklist mentality or premature implementation.

■ Declarations

■ Ethical considerations

This chapter did not require ethical clearance or consent as it synthesises existing literature and does not present primary research.

■ Authors' contributions

Sumaiya Adam: Conceptualisation, Writing – original draft, Writing – review & editing.

Brian Gardner: Conceptualisation, Writing – original draft, Writing – review & editing.

Both authors reviewed the chapter, contributed to the discussion of results, approved the final version for submission and publication and take responsibility for the integrity of its findings.

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■ **Disclaimer**

The views expressed in this chapter are the authors' own and not an official position of the institution, funder or the publisher.

■ Appendix 1

■ Seven steps for core team using the entrustable professional activities creation template

- | | |
|--------------------------|--|
| 1. The team | <ul style="list-style-type: none"> • Assemble a national discipline-specific core team of five to six core members (up to 10) drawn from across the country's training platforms. • Include content experts at varying levels (senior specialists, mid-career clinicians, early-career educators and/or trainees). • Augment shared expertise with key literature, national curricula and international EPA frameworks. • Build EPA-writing skills via workshops and/or webinars, standardised templates and iterative peer review. • Establish a shared mental model with common definitions (supervision levels, entrustment criteria, competency domains). |
| 2. The 'job description' | <ul style="list-style-type: none"> • Identify key activities of the 'job description'. • Agree on EPA purpose, implementation approach, scope and total number. • Standardise definitions of EPAs, competencies and KSAs, including professional behaviour via the Ubuntu A-RICH framework. • Leverage published EPAs and the current curriculum as a foundation. • Map the 'day-in-the-life' of a fit-for-purpose graduate into key tasks to be expanded into EPAs. • Integrate local context and regional nuances into each EPA. • Produce an EPA title list with links back to the curriculum. |
| 3. Describe the EPAs | <ul style="list-style-type: none"> • Consider the four sources of information. • Determine your EPA count: aim for 4–5 per training year (~20–30 total); use nested sub-EPAs under broader headings to add detail without overloading users. • Apply a quality-check tool (e.g. the EQual Rubric) to your emerging EPA framework early and iteratively. • Recognise that not every clinical activity or condition warrants its own EPA. • Draw on key information sources (e.g. existing curricula, stakeholder input, literature, workplace data). • Flesh out each EPA by specifying its scope and limitations plus the required knowledge, skills, attitudes and experiences. |
| 4. Broader consensus | <ul style="list-style-type: none"> • Get broader consensus on the draft. • Recruit a broader sample of 10–50 end-users representing all stakeholder groups for draft review. • Conduct structured Delphi rounds: anonymous surveys with iterative feedback and controlled feedback summaries or convene Nominal Group Technique sessions: in-person or virtual workshops with facilitated idea generation and prioritisation. • Aggregate and analyse feedback after each round and/or session to identify areas of agreement and divergence. • Revise the EPA drafts iteratively, sharing updates with participants until stable consensus is achieved. |

5. Pilot test the EPAs	• Pilot the draft EPAs at 2–4 institutions chosen for their diverse contexts (e.g. urban vs rural, high- vs low-resource, varied case-mix). • Expand to as many additional sites as feasible to capture a broad spectrum of challenges and barriers. • Use structured feedback methods (standardised surveys, focus groups, site-specific debriefs) to gather constructive, actionable input. • Record and compare context-specific enablers and obstacles at each pilot site. • Iteratively refine the EPA framework after each pilot cycle, incorporating user suggestions. • Plan for subsequent waves of site testing to validate and further improve the framework before national implementation.
6. Implement	• Develop an implementation plan with clear timelines, responsibilities and institutional support. • Train faculty and supervisors in EPA-based assessment, workplace-based tools and entrustment decisions. • Establish a clinical competency committee to review EPA progress, make entrustment decisions and ensure fair, consistent evaluation. • Integrate EPAs into clinical rotations and curriculum, aligning them with learning objectives and assessment strategies. • Use tracking tools to document EPA completion and entrustment levels over time. • Ensure continuous feedback to trainees.
7. Monitoring, evaluation, learning & adaptation (MELA)	• Map EPAs to existing curriculum, including logbooks, content and rotations, to ensure alignment with teaching and assessment. • Assess feasibility by evaluating available resources, faculty capacity and clinical exposure across sites. • Identify and address gaps or redundancies to streamline EPAs and ensure balanced coverage of key competencies. • Evaluate effectiveness through regular feedback from trainees, faculty and clinical competency committees. • Continuously refine EPAs and implementation strategy based on real-world performance and context-specific challenges.

Making decisions to trust others

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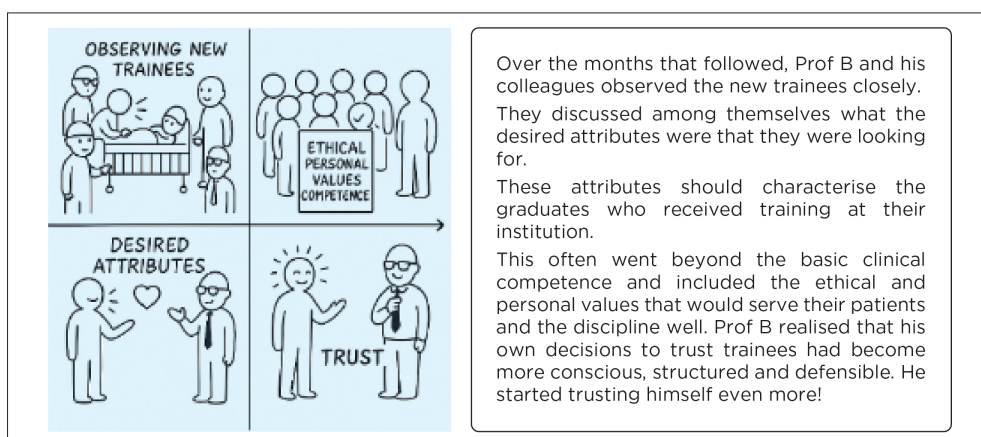
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■ Abstract

Health professions education (HPE) primarily revolves around delegating clinical responsibilities to a trainee, with an increasing level of autonomy over time. A decision on the required level of supervision is referred to as an entrustment decision. Consequently, trust plays a crucial role in the training process and the formation of a trainee's professional identity.

Trust in a clinical context involves a collaborative triadic relationship between the supervisor, trainee and the patient. The decision to entrust a trainee to perform a task independently must be balanced against patient safety. The characteristics that supervisors consider crucial when making entrustment decisions are agency, reliability, integrity, capability and humility (A-RICH). A trainee's trust in a supervisor's benevolence, integrity and competence enables them to be authentic without fear of judgement, thus allowing for a more accurate assessment of the ability to perform a task. In a broader context, public trust in the health care system can determine how a patient interacts with health care providers and trust in a doctor-patient relationship is associated with better patient outcomes.

The clinical learning environment plays a crucial role in developing trust between patients, supervisors and trainees. It is the social, cultural and material framework where experiential learning occurs. A learning environment that is animated by the philosophical foundations of Ubuntu emphasises interconnectedness, community, compassion and mutual support (Tutu 1999). It encourages an environment that is inclusive, supportive and patient-centred and promotes transparent, respectful interactions that foster trust.



Source: Figure created by Sumaiya Adam (2026).

FIGURE 5.1: How Prof B makes decisions to trust his trainees.

■ Introduction

Making decisions regarding the entrustment of a trainee's competence is a core outcome of workplace-based assessment (WBA). Entrustment – the act of a supervisor granting a trainee the autonomy to perform specific units of work based on assessed competence – is vital for learning and forms the foundation of professional growth.

The landscape of postgraduate medical training in South Africa (SA) is complex, with systemic challenges such as high patient loads, poor staffing levels and limited resources, which significantly shape clinical practice (Maphumulo & Bhengu 2019). Factors such as staff shortages and increased clinical load may also result in trainees being entrusted with more complex cases earlier in their training, presenting the difficulty of reconciling patient safety and educational training with the realities of clinical service demands. Understanding subtle factors that influence entrustment decisions – ranging from trainee readiness to supervisory style, to contextual factors – is essential to foster effective supervision and promote trainee learning without compromising patient safety (Ten Cate et al. 2016).

Given the central role of trust in the context of health professions education (HPE), this chapter focuses on unpacking the definition, types of trust and what trust implies from the viewpoint of various stakeholders. We also explain how to develop and maintain trust from an internal locus of control, as well as by considering the context. Ubuntu, as a communitarian philosophy that asserts the primacy of harmonious relationships as the foundations of a strong society, emphasises interconnectedness, community, compassion and mutual support and encourages a learning environment that is inclusive, supportive and patient-centred, promoting transparent, respectful interactions that foster trust. An Ubuntu-inspired model of trust, incorporating the agency,

reliability, integrity, capability and humility (A-RICH) dimensions of trust, as proposed by Ten Cate and Chen (2020), is proposed here. Lastly, we discuss how supervisors make entrustment decisions using entrustment rating scales.

■ Unpacking trust

■ Definition of trust

What defines trust in the workplace? According to Mayer, Davis and Schoorman (1995), it is:

[w]illingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party. (p. 5)

Mayer et al. (1995, p. 10). emphasise that the essence of trustworthiness is ability, benevolence and integrity. In a clinical context, Ten Cate and colleagues define trust between supervisor and trainee to be '[r]eliance of a supervisor or medical team on a trainee to execute a given professional task correctly and on his or her willingness to ask for help when needed' (Ten Cate et al. 2016, p. 2).

Trust in a clinical context supports trainee learning without compromising patient safety. It is an essential component for a collaborative partnership between the supervisor, trainee and patient (Ten Cate et al. 2016).

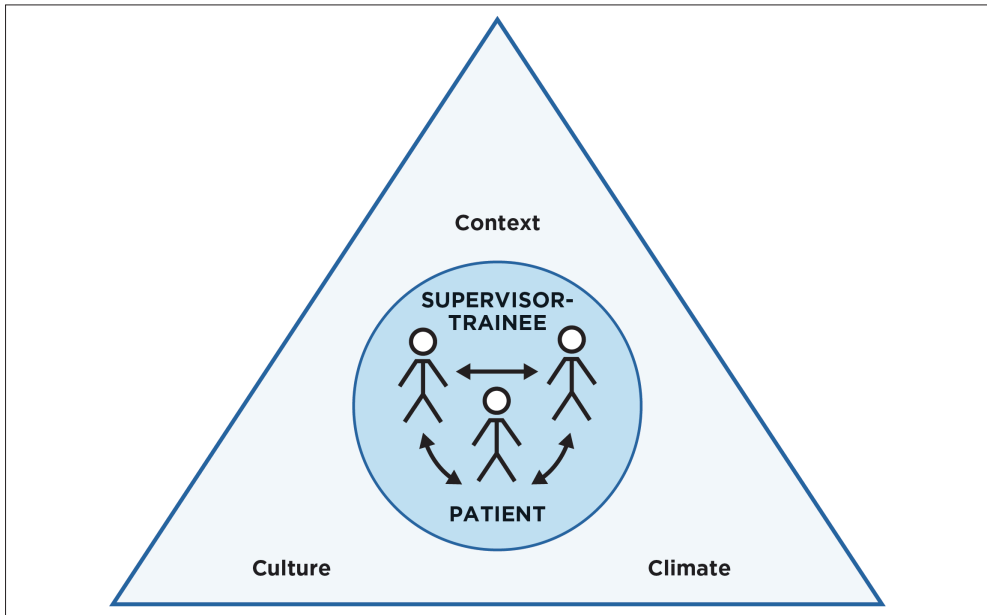
■ Types of trust

There are three types of trust in the clinical supervisor–trainee relationship: presumptive, initial and grounded trust (Ten Cate et al. 2016, p. 3).

- *Presumptive trust* is based on the trainee's credentials without prior interaction. In this instance, the supervisor places trust in the institution or referee that endorsed the trainee.
- *Initial trust* stems from first impressions, which both trainee and supervisor factors may influence. The trainee will likely want to create a favourable first impression, while the supervisor may have certain biases based on previous experiences with similar trainees.
- *Grounded trust* develops from prolonged experience with a trainee and is supported by sufficient observations to validate autonomy.

■ Trust from perspective of different stakeholders

An environment conducive to learning and patient care is a prerequisite for trust in a medical environment. This has been described as a collaborative and/or interactive triad involving the supervisor, trainee and the patient (Ten Cate et al. 2016; Ten Cate & Chen 2020) (Figure 5.2).



Source: Figure created by Sumaiya Adam (2026).

FIGURE 5.2: Key interactions within the clinical training ecosystem.

However, additional aspects of trust should be acknowledged, including doctors' trust in patients, clinical activity and trust in professional colleagues, self-trust, workplace trust and system trust (Douglass & Calnan 2016).

■ Supervisor perspective: Trusting trainees

Key characteristics of trainees that clinical supervisors find crucial in making entrustment decisions include agency, reliability, integrity, capability and humility (Ten Cate & Chen 2020). These themes are outlined in Table 5.1 and are considered a valuable framework for clinicians when making entrustment decisions that consider patient safety, leading to the acronym for 'A-RICH' entrustment decision (Ten Cate & Chen 2020). When viewed from the perspective of Ubuntu, it is possible to expand this framework to include the concepts of compassion, openness and curiosity.

Positive support-seeking behaviours demonstrate humility, promote patient safety and enhance the trainee's learning (Ten Cate & Chen 2020). A trainee's support-seeking behaviour and knowledge of their limitations form important components of the scaffolding of trust, for example, do

TABLE 5.1: Agency, reliability, integrity, capability and humility entrustment decision framework.

Domain	Description
Agency	Ability to take initiative when action is warranted.
Reliability	Demonstrate a sense of responsibility and accountability towards the patient.
Integrity	Trusting a trainee to make decisions that are in the best interest of the patient.
Capability	The ability to perform tasks in different contexts and environments.
Humility	Willingness to seek help and guidance. Demonstrate self-awareness and insight into own limitations.

Source: Gerda Botha, Abigail Dlova and Vanessa Burch’s own work, adapted from Ten Cate and Chen (2020).

trainees know their limitations, seek timely feedback and ask for help when needed? Or do they avoid asking for help even when unsure, over-rely on peers or supervisors to solve issues, or hide mistakes out of fear? (Schumacher et al. 2022). While support-seeking behaviour can promote the credibility of the trainee and facilitate trust in continued patient care, inappropriate support-seeking behaviour or if done too frequently, can inhibit entrustment and negatively impact supervisors’ evaluations of trainees (Wiese, Kilty & Bennett 2018, p. 957).

Insight into oneself is integral to the development of a safe and independent practitioner. According to Ng et al. (2024), insight in a clinical context could be defined as developing an understanding of one’s own cognitive, emotional, motivational state and competencies that influence decision-making and behaviour.

Improvements in clinical outcomes necessitate physicians’ self-awareness concerning their deficiencies and the drive to address them (Hays et al. 2002). Having good insight is important for developing clinical competency, maintaining medical professionalism and for self-regulated learning. This implies that trainees can self-reflect, set their own initial learning goals, monitor and appraise their own performance and adjust their behaviour to achieve learning objectives. Training in emotional intelligence and feedback literacy plays a crucial role in fostering insight (Hays et al. 2002; Ng et al. 2024). It has been acknowledged that personality characteristics and learning styles can both influence trainees’ academic results and clinical competence. Facilitating specific educational needs of trainees based on their personality and learning styles may therefore improve academic performance (Abouzeid et al. 2021).

In workplace-based assessment, entrustment decisions are linked to demonstrated competence and trainees are required to collect evidence to support their progression to autonomy. The Johari window model is a useful framework to understand the role of that evidence and the impact of self-awareness and reflection on entrustment decisions in WBA. The Johari window model is a psychological tool that was developed by Luft

(1961) and Ingram to facilitate effective communication and has subsequently been adopted by various disciplines inside and outside medicine as a framework for various purposes, including assessment of the reliability and validity of evidence submitted for performance management for education practitioners. Ramani et al. (2017) explore the use of the model's four quadrants in guiding and improving the quality of feedback in a residency programme.

The model stipulates four different quadrants:

1. *Known to self and to others*: This is also known as the *Open Area*, where a trainee's accurate self-assessment of his and/or her competencies is shared by the supervisor. Entrustment decisions are therefore more reliable, which leads to increased autonomy of tasks.
2. *Known to self and unknown to others*: This is the blind quadrant where underperformance is unknown to the trainee but known to the supervisor. Structured feedback is essential, ideally from multiple supervisors, to align trainees' self-perceptions of their ability to observed competence. This will, in turn, lead to more accurate decisions about their progression.
3. *Unknown to self and known to others*: This is known as the hidden quadrant. This quadrant is known to the trainee and not to the supervisor. It requires self-disclosure by the trainee and is aligned with integrity and humility, the *A-RICH* framework attributes.
4. *Unknown to self and unknown to others*: Here, the domains are unknown to both the trainee and the supervisor and faculty. This could potentially identify systemic failures and would require robust faculty discussion involving both trainers and trainees to identify the impact and the quality of training processes in an institution.

Ramani et al. (2017) concluded that the use of the Johari model could be beneficial in providing meaningful feedback to trainees and trainers. This, in turn, expands the first quadrant or Open Area, where supervisors will be more confident to grant autonomy to a trainee. In the context of WBA in SA, we therefore propose that supervisors are more likely to trust trainees who manifest insight into their own development within the A-RICH model, complemented by the principles of compassion, openness and curiosity.

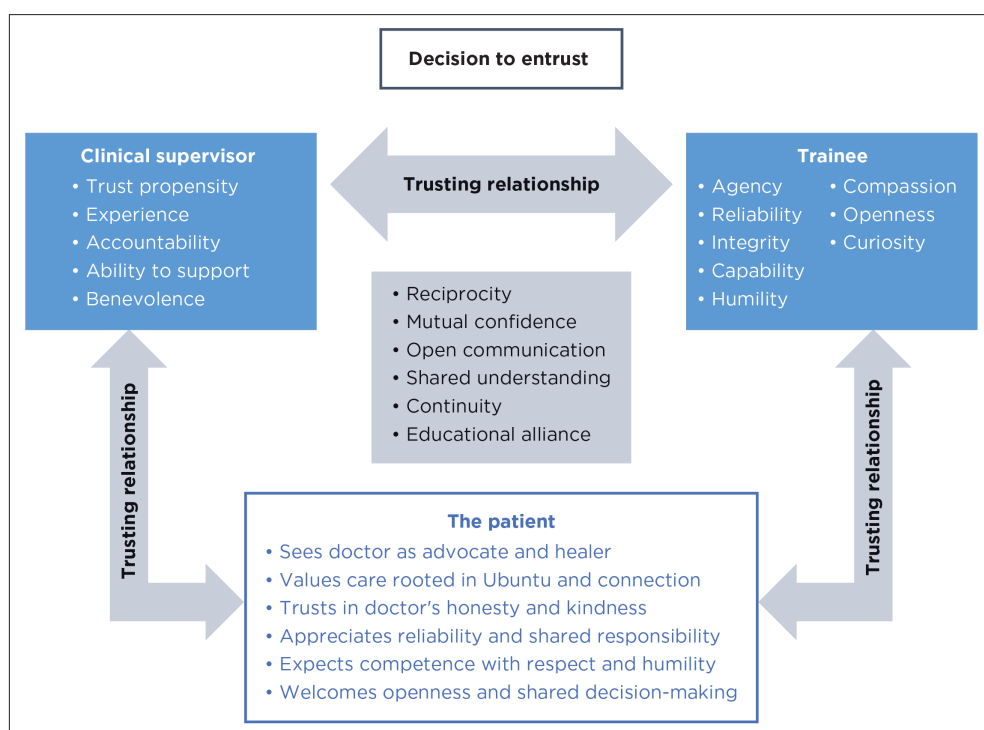
■ Trainee perspective: Trusting supervisors

For workplace-based assessment to be effective in health professions training, trust between the supervisor and trainee should be bidirectional. Mutual trust encourages trainees to express themselves authentically and to seek help without fear of judgement by their supervisors. This allows for a more accurate assessment of their abilities, and trainees are more receptive to feedback. To cultivate trust, supervisors need to demonstrate

competence and to possess the necessary skills for effective supervision (Castanelli et al. 2022).

Trainees should feel confident that supervisors are invested in their development, manifested by assessments that are fair, availability to support the resolution of complex problems and a demonstrated commitment to fostering the growth of others (Castanelli et al. 2022).

Trustworthiness of supervisors encompasses the traits of ability, benevolence and integrity. Castanelli et al. (2022) emphasise the significance of integrity in both teaching and clinical ability to foster trust. However, benevolence is the most critical factor for establishing a trusting relationship that enables assessment for learning (Castanelli et al. 2022). Instances where trainees are vulnerable and receive affirming responses from the supervisor are critical to strengthen trust in supervisor-trainee relationships. These interactions are important in affirming the supervisor's ongoing commitment to, and investment in, the continued professional development of a trainee, even in moments of failure (Castanelli et al. 2022). Figure 5.3 illustrates the supervisor-trainee-patient triad.



Source: Figure created by Sumaiya Adam (2026).

FIGURE 5.3: The supervisor-trainee-patient triad.

■ Patient perspective: Trusting doctors and the system

If we accept that when patients feel safe with clinicians, they confer trust in that clinician, then patient trust becomes an important indicator of whether trainees are achieving their desired outcomes. This should influence supervisors in their deliberations on whether the trainee can, in fact, be trusted.

When a trainee is unable to establish a rapport with a patient (perhaps because of poor communication skills), the clinical supervisor may be resistant to entrusting the trainee with critical activities, even if the trainee has sufficient knowledge and skills. Patient-physician partnerships that enjoy high levels of trust have been shown to improve the quality and safety of care, patient health outcomes and overall experience of both the patient and the physician (Grob, Darien & Meyers 2019). Integral to patient-provider trust is respectful treatment in terms of positive attitudes, thoroughness and technical competence, as well as institutions that support fair treatment (Gilson, Palmer & Schneider 2005).

The ongoing decline of public trust in doctors and health care systems was highlighted in a recent blog by Burch (2025). She suggests some measures to counter the decline, including:

- Understanding the building blocks of public trust, aligning training with society's needs
- Closing the trustworthiness gap between patients, trainees and practitioners for improved honest and ethical practice and communication
- Allocating sufficient resources to frank conversations within the health care system
- Addressing potential health-related and fiscal consequences of declining trust
- Engaging with patient communities and keeping society informed of educational developments that focus on improving the trustworthiness of doctors.

For a workplace-based assessment programme to be truly effective in the real world, the perspectives of patients on the performance of trainees become a vitally important source of data that feeds into the bigger picture of the trainee's development.

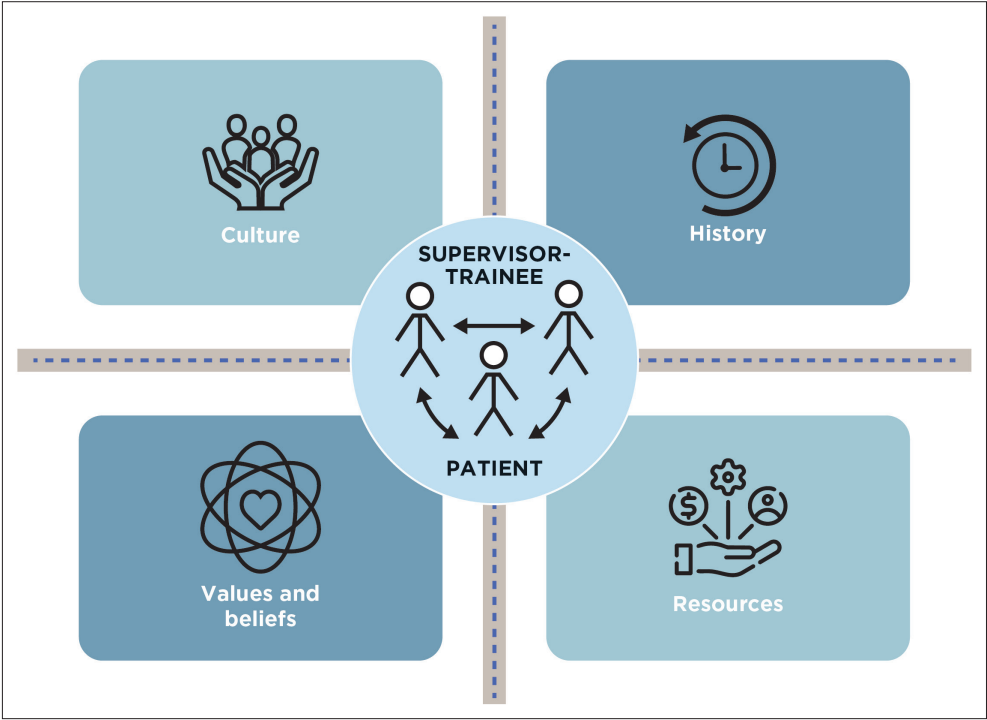
■ Supervisor and trainee trust related to the context

Contextual aspects, which can be material (e.g. resource availability) or social (e.g. group dynamics), influence trainees' participation and,

consequently, supervisors’ ability to trust them with responsibility. Context includes opportunities for participation in authentic work activities, work environment, workload and workplace culture. For instance, a budget-constrained facility could impede trainees’ clinical exposure and/or require trainees to work independently without observation or feedback. On the other hand, well-resourced health care systems may enable trainees to spend time on more challenging tasks. Familiarity with a context may promote teamwork and interprofessional communication, while the hidden curriculum may inform professional behaviour, communication, as well as group norms and values (Figure 5.4) (Hauer et al. 2014).

These factors influence the trainees’ decision to seek support, making this a complex and nuanced area. Table 5.2 summarises the findings of research conducted by Wiese et al. (2018) that looked at factors affecting supervised workplace learning in postgraduate medical training.

Within a team context, interprofessional trust is particularly important for WBA as supervisors from different disciplines could provide feedback



Source: Figure created by Sumaiya Adam (2026).

FIGURE 5.4: Stakeholder entrustment triad within the context of specialist training in South Africa.

TABLE 5.2: Factors affecting support-seeking behaviour in postgraduate medical training.

Domain	Supervisor	Trainee	Context
Encourage support-seeking behaviour	Approachability	Trainee agency	Complexity of case
	Being available or in close proximity		Explicit declaration of availability of team
	Clear communication on when to call		Supportive culture
Inhibits support-seeking behaviour	Intolerance to being called	Worry about loss of trust, autonomy, negative evaluations	Busy working environments
	Being 'too busy'		Negative work culture: bullying, scapegoating, rude or dismissive communication

Source: Table created by Sumaiya Adam (2026).

to trainees. Conditionally earned trust is rooted in competence, confidentiality, honesty, reliability, personal manner and acting in the best interests of others and it is eroded when these values are not present. Trust in managers is rooted in perceptions of having shared interests, which may be lost when managers are perceived as prioritising policy or financial targets over clinical care needs (Douglass & Calnan 2016, pp. 393–413).

A context rich in trust facilitates learning by creating a space where trainees feel supported, empowered to ask questions and find a sense of belonging within a team. For workplace-based assessment to be a transformative process, the notion of trust must extend beyond just the supervisor–trainee dyad and come to be seen as enveloping all relational encounters in the clinic.

■ Building trust: Looking within

■ Emotional intelligence

Emotional intelligence plays a role in all social relationships but is especially important in facilitating positive supervisor–trainee engagements. Johnson defines emotional intelligence as ‘the ability of an individual to perceive and understand emotions in oneself as well as others, regulate one’s emotions and then manage those emotions in oneself as well as others’ (Johnson 2015).

Emotional intelligence should be prioritised as a teachable attribute that can help resolve dysfunctional elements in supervisor–trainee and clinician–patient interactions. Although Johnson’s research focused on undergraduate training, it has significance for medical specialist training. Workplace-based assessment represents a complex social process that unfolds during patient care delivery. Consequently, fostering the emotional intelligence of

supervisors and trainees is essential for building trusting relationships that contribute to effective learning and better-quality health care (Johnson 2015). Emotional intelligence has five different components: self-awareness, self-regulation, motivation, empathy and social skill (Frothingham 2024).

Eckroth-Bucher (2010, p. 304) describes self-awareness as ‘a multi-dimensional, introspective process aimed at gaining awareness of, examining and comprehending one’s thoughts, emotions, beliefs and values continuously’.

Self-awareness, reflection and critique include:

- Understanding personal strengths and limitations and how one is perceived by others as well as acknowledging gaps in knowledge regarding personal or cultural biases
- Continuous reflection after each interaction – considering thoughts, feelings, actions – fosters ongoing personal development while practising self-compassion (crucial for the development of self-regulation)
- Stepping back from situations to investigate personal assumptions, privilege, identity, biases, prejudices and values shaped by one’s social background and environment to understand their influence on experiences and thought processes (important for developing empathy)
- Requiring a responsible, critical moral dialogue on how thoughts, feelings, beliefs and values impact relationships; specifically, on the power dynamics and imbalances involved in relationships.

Individuals with self-awareness can self-reflect on negative or positive experiences and learn from these experiences (London, Sessa & Shelley 2023). Self-awareness allows one to recognise one’s strengths and weaknesses, recognise and manage one’s emotions and accept criticism and be more open and receptive to feedback (London et al. 2023). In the enactment of WBA, emotional intelligence assists in developing social skills that improve the quality of relationships, which are required for good educational and clinical outcomes in the workplace.

■ Social intelligence

Social intelligence is the ability to understand, interpret and respond effectively to the behaviour and emotions of others. Individuals with high social intelligence have good communication skills; they understand others emotionally and work well with peers in a team (Zautra et al. 2015). This is especially important in WBA, as entrustment decisions depend not only on technical skill and knowledge but also on how effectively a trainee

operates within a team. A socially intelligent supervisor is better able to manage difficult conversations, demonstrate empathy and give effective feedback, which facilitates a safe learning environment and promotes trust.

■ Cultural humility

Cultural humility is critical in entrustment decisions as it influences fairness in assessment, where entrustment is not hindered by cultural stereotyping. Supervisors can mitigate and recognise their own biases (implicit or explicit) during entrustment decisions. In the context of globalisation and diverse student and patient populations, there should be more acute awareness of cultural diversity, group identity, privilege, bias, prejudice and relationship power imbalances and their linkages to injustice, inequity and disparity. Benatar and Gill (2021, p. 51) call for 'shifts in thinking and action' to 'acknowledg[e] the systemic determinants of health, deeply distorted power relations, cultural complexities, pervasive corruption, poor leadership'.

The imperative for educators to intentionally and explicitly bridge cultural divides is that it facilitates quality and equitable training and care, understanding the multicultural elements in the clinical space, in the dynamic interaction between trainees, supervisors, patients and the institutional culture within which they find themselves. Therefore, the concept of cultural humility has emerged for sensitising training:

In a multicultural world where power imbalances exist, cultural humility is a process of openness, self-awareness, of being egoless and incorporating self-reflection and critique after willingly interacting with diverse individuals. The results of achieving cultural humility are mutual empowerment, respect, partnerships, optimal care, and lifelong learning. (Foronda et al. 2016, p. 213)

All stakeholders must take responsibility for creating environments where everyone – patients, undergraduate students, nurses, medical officers and others – feels comfortable expressing their opinions and seeking assistance. It is crucial to treat others with respect and compassion, avoiding any behaviour that might belittle them. Humility is also expressed in the ability to apologise sincerely when mistakes are made, requiring emotional intelligence to animate functional teams, manifested as expressing regret, accepting responsibility, repenting for actions taken, making amends and requesting forgiveness (Chapman & Thomas 2022).

Personal and cultural humility, when viewed as functions of an effective WBA programme, facilitate authentic and powerful connections between people of diverse backgrounds and perspectives.

Additional identifiable components of cultural humility

1. Supportive interaction

- Engaging willingly with a variety of individuals, fostering connections and being comfortable with diversity
- Recognising the skills necessary for enhanced interactions, collaborating effectively within interdisciplinary and multi-sector teams
- Respecting the roles of all team members, being open to learning from others, including patients
- Being mindful of the influence one has on others in various situations

2. Open-mindedness

- Exhibiting genuine openness and an accepting attitude towards new ideas, experiences and conflicting information
- Exploring alternative perspectives, seeking advice to facilitate learning, demonstrating readiness to adapt
- Challenging preconceived notions, addressing biases and prejudices and avoiding uncritical acceptance of familiar or societal beliefs

3. Egolessness/humility

- Embracing humility by setting aside ego
- Maintaining modesty and a grounded demeanour
- Approaching others on equal footing without any sense of superiority fosters a flattened hierarchy
- Recognising that one can never fully understand another person's experience allows for the acknowledgement of multiple truths

■ Building trust: Looking out

The initial description of cultural humility has an explicit focus on agency, advocacy and partnership building:

[T]o redress... the power imbalances in the patient-physician dynamic, and to developing mutually beneficial and non-paternalistic clinical and advocacy partnerships with communities on behalf of individuals and defined populations. (Tervalon & Murray-García 1998, p. 117)

Some patients delay seeking care because of perceived cultural insensitivity and a concern that they will receive a lower quality of care, or that they may be treated unfairly because of race or ethnic background. The same may apply to trainees seeking help from supervisors. When sociocultural differences between stakeholders are not appreciated, explored, understood, or, when necessary, discussed, the result is a loss of trust and relationship-building, which in turn affects training and health outcomes.

Structural humility recognises structural aspects that shape interactions and observes structural interventions for training and care. Examples include stakeholders formulating a structural factors problem list and planning together, involvement in community-level advocacy work, local and national government policy advocacy and participation in organisations working collectively to address inequity and social injustice.

Summary of pointers for action

- Understanding that inequality is the inevitable result of two powerful forces, i.e. prejudice/bias at the level of an individual and political imbalance at a societal/structural level
- Understanding historical and oppressive barriers; situating health and social issues within the context of history, societal norms, as well as power and privilege
- Understanding health disparities adversely affects marginalised groups, systematically experiencing greater obstacles to training and care (based on race, language, gender, socio-economic status, mental health, physical ability, geographical location, etc.)
- Expanding analysis from interaction between individuals reflecting on how oppression, governmental policies and environment impact the development and well-being of people
- Understanding the importance of agency and advocacy in the context of a relationship (personal level) **AND** in the context of systems (political or structural level)
- Understanding the role of interprofessional collaborative practice to address disparities, valuing everyone equally
- Working collaboratively with community agencies, non-governmental organisations and policymakers to affect community and population-level health outcomes
- Addressing discriminatory attitudes of individuals (e.g. rudeness, lack of compassion, use of public resources for private gain, late coming, mismanagement, etc.) **AND** addressing structural systemic problems, e.g. lack of leadership, facilities, equipment, corruption, etc.)

■ Expanded A-RICH framework for South Africa

In the context of Ubuntu, as introduced in Chapter 1, specialist training in SA should be grounded in the African philosophy of community and context. In this way, stakeholders can associate social responsiveness and professionalism with the Ubuntu (humanity) philosophy of ‘I am because you are’ (in IsiZulu: *umuntu ngumuntu ngabantu*). This also aligns with many African institutions’ values (Ewuoso & Hall 2019). Based on this philosophy, the A-RICH model of trainee trustworthiness can be expanded to include all the elements of the supervisor-trainee-patient triad, as shown in Table 5.3.

TABLE 5.3: Blended framework of Ubuntu principles and agency, reliability, integrity, capability and humility model of trustworthiness.

Domain	Trainee	Supervisor	Patient	Context
Agency: Proactive towards work, team, safety, self-development	Takes initiative with love for service; drives self-growth with perseverance; uplifts others through compassion and teamwork	Encourages proactive attitudes; nurtures leadership with caring, responsibility and honesty	Seen as expert in their condition and context; participates in a shared-decision making process including the development of a management plan; respects personal values and preferences	Stakeholders engage in communities of practice, patient communities and broader society; participates in advocacy partnerships
Reliability: Conscientious, accountable, responsible	Fulfils responsibilities consistently; practises self-control to manage tasks; shows perseverance in difficult settings	Evaluates follow-through and accountability; instils a culture of responsibility and honesty in team dynamics	Sees reliability as a sign of caring and commitment; values dependability rooted in Ubuntu and shares responsibility; adheres to agreed-upon management plan	Provides training and care that responds to the needs of trainees, patients and society
Integrity: Truthful, benevolent, patient-centred	Acts with honesty and love for humanity; puts patient needs first; admits mistakes with self-control and seeks forgiveness	Models ethical behaviour with compassion; nurtures honesty and encourages reflective practice in moral dilemmas	Trusts the doctor to be truthful, kind and caring; experiences forgiveness and love in how care is delivered; provides honest information; respects physician's personal and time boundaries	Acts in the best interest of the community and society; provides honest and accurate reports; promotes professionalism and an ethics-driven work ethos
Capability: Knowledge, skills, experience, situational awareness	Demonstrates clinical skill with self-control; seeks learning with perseverance; adapts to community needs with compassion	Observes application of knowledge with responsibility; supports growth with patience and care for trainee development	Expects respectful, competent care grounded in caring and honesty; recognises growth through effort and humility	Provides proficient and appropriate training experiences with relevant resources
Humility: Recognises limits, asks for help, accepts feedback	Acknowledges limits with honesty and self-control; seeks help respectfully; learns with humility and perseverance	Creates a safe space for feedback and vulnerability; demonstrates forgiveness and compassion in guiding trainees	Appreciates when the doctor admits uncertainty; perceives humility and love in openness and shared decision-making	Acknowledges diversity and disparities in training and health care; addresses power imbalances that impede on training and care

Source: Sumaiya Adam's own work, adapted from Ten Cate and Chen (2020).

■ How do we make decisions to trust trainees?

Entrustment in clinical training refers to the level of confidence a supervisor has in a trainee's ability to safely and competently perform a task without supervision (Ten Cate et al. 2016). Entrustment decisions involve the transfer of responsibilities to the trainee when the supervisor deems it appropriate (Ten Cate et al. 2016). Entrustment decisions usually involve some risks, especially when a trainee is responsible for a patient's care, and the supervisor must be confident that the trainee will be able to perform the task well and not jeopardise patient safety (Ten Cate et al. 2016).

When supervisors work with a new trainee, entrustment is based on the trainee's level of training and reports of competence (initial trust) (Ten Cate et al. 2016). Developing grounded trust requires time and consistent observations across various situations to evaluate trainees' performance, for the supervisor to gain firsthand experience of their trustworthiness and abilities (Wiese et al. 2018). An entrustment decision should consider a trainee's capability (applying competencies in real life), integrity (honesty and benevolence), reliability (consistent and responsible behaviour) and humility (awareness of their limitations and willingness to seek help) (Ten Cate et al. 2016). In deciding to allow a trainee to perform a task with reduced oversight, the supervisor acknowledges the inherent risk of the trainee potentially encountering an adverse event, but this risk should be considered manageable so that patient safety is not compromised (Ten Cate et al. 2016; Wiese et al. 2018).

■ At what stage do we assign trust to trainees?

Entrustment decisions may be categorised as ad hoc or summative (Schumacher et al. 2021). An ad hoc entrustment decision is an 'in the moment' one-time decision and does not constitute a similar decision in the future. It happens daily in the clinical setting and is intuitive. In simple terms, it is where supervisors use their 'gut feeling' and unconscious judgement about a trainee's ability to handle a task. Ad hoc entrustment decisions are complex decisions, in that they are nuanced by trainee factors (capability, level of training), supervisor factors (propensity to trust) and context (level of difficulty of the case, time of day) (Schumacher et al. 2021). Ad hoc entrustment decisions can be defined as 'the act of placing trust in another person to perform a particular activity in the moment of working with them' (Schumacher et al. 2021, p. 739).

In contrast, a summative entrustment decision is made by a clinical competency committee, informed by sufficient clinical observations and assessment, that ultimately leads to certification and allows the trainee to perform a task without supervision. Trainees progress through various levels of entrustment, from initially only being allowed to observe (fully supervised) to performing a task independently (unsupervised or supervising others) (Schumacher et al. 2021).

■ Can we place trust on a scale within clinical training?

Entrustment rating scales are designed to match the way supervisors naturally assess trainees in clinical settings. This alignment improves reliability as supervisors base their judgements on real-world experiences, such as deciding whether a trainee can handle a procedure without supervision. By reflecting these everyday decisions, entrustment rating scales provide meaningful and realistic assessments that balance trainee learning with patient safety (Crossley & Jolly 2012).

Entrustment scales are inherently subjective and influenced by multiple factors, namely, supervisor-trainee relationship, supervisor's experience, complexity of the task and others. Consistent assessments with different supervisors and in various contexts enhance the accuracy of these judgements. Well-designed entrustment scales that are used by trained supervisors can be used to make informed decisions about a trainee's readiness for autonomy (Crossley & Jolly 2012).

Evaluating trainees based on their readiness to perform tasks independently addresses two common challenges in workplace assessments: central tendency bias and leniency bias (Williams, Klamen & McGaghie 2003):

- Central tendency bias occurs when supervisors avoid using the highest or lowest parts of a scale and instead assign an average rating, which can make it hard to distinguish between trainees who are performing very well and those who need additional support or remediation. This is disadvantageous, as it prevents precise feedback.
- Leniency bias, on the other hand, occurs when supervisors give more favourable ratings than deserved to avoid conflict or maintain a good relationship. This results in overestimation of a trainee's abilities and risks trainees being deemed ready for autonomy prematurely and consequently risks patient safety.

By focusing on whether a trainee is truly prepared to handle tasks autonomously, supervisors should confidently utilise the entire range of scoring options, resulting in more meaningful assessments (Williams et al. 2003).

Rating scales help supervisors provide clear and constructive feedback based on real-life decision-making. This approach ensures that assessments accurately reflect progress towards safe, independent practice, rather than comparing trainees to peers or abstract benchmarks. Research has shown that trainees are more open to receiving lower assessment ratings when assessed using entrustment rating scales. These scales focus on readiness for tasks, making feedback constructive. The emphasis is on preparing for independent practice rather than comparing performance, aligning with competency-based medical education's (CBME) focus on formative feedback to guide progress (Gofton et al. 2012).

Entrustment rating scales assist trainees to gradually work towards independence during training, starting at level 1 (novice, can observe only) and aiming for level 5 (unsupervised and can teach others). These scales focus on individual progress and therefore make it easier to identify a trainee in difficulty, allowing for timely remediation. Importantly, the expectation should not be that progression is linear, as there are many variables that impact the overall development of trainees that may require reinforcing their training in certain areas of work.

Supervisors routinely make such entrustment decisions throughout a trainee's development, not just during final evaluations. Indeed, this has always been the basis of clinical training, but the inclusion of good-quality feedback and proper documentation of the events is now a major driver of the WBA initiative.

A framework of five levels of supervision has been proposed by Ten Cate, Schwartz and Chen (2020), based on an entrustability scale, which is a behaviourally anchored ordinal scale based on progression to competence (Ten Cate et al. 2010). Using the levels of supervision for observations of entrustable professional activities (EPAs), supervisors can align the complexity of the task to the competence of the trainee, providing feedback on their performance that enables trainees to handle progressively more complex aspects of patient care as their competence grows (Ten Cate et al. 2010). This entrustment forms an important part of a trainee's professional identity formation (PIF) (Wiese et al. 2018). As discussed in Chapter 2, five levels of entrustment have been adopted for medical specialist training and are shown in Table 5.4.

TABLE 5.4: Entrustment scale proposed for postgraduate medical specialist training for South Africa.

Level of entrustment		What can I trust this trainee to do	Example: Entrusted to do a caesarean (C-) section
Level 1		Trainee is present and observes only	Trainee can be trusted to be in the theatre to observe the procedure
Level 2		Trainee acts with direct, pro-active, on-site supervision	Trainee can be trusted to perform the C-section, assisted by the on-site supervisor
Level 3	On-site supervision	Trainee acts with indirect, reactive supervision: supervisor available on-site to provide in-person assistance	Trainee can be trusted to do the C-section, with supervisor on site
	Off-site supervision	Trainee acts with indirect, reactive supervision: supervisor reachable by phone and able to attend on-site, as required*	Trainee can be trusted to do the C-section, with supervisor available via phone and can arrive on-site at short notice should the need arise
Level 4		Trainee acts independently: supervisor reachable by phone, if required	Trainee can be trusted to do a C-section with an off-site supervisor who can be called to discuss the patient
Level 5		Trainee provides oversight for a junior colleague	Trainee can supervise and train junior doctors on doing a C-section

Source: Table created by Sumaiya Adam (2026).

■ Conclusion

On an interpersonal level, when the relationship between supervisor and trainee or doctor–patient relationship is founded on trust, it leads to effective supervision and improved patient safety. Trust enables open transparency and fosters a culture that encourages learning from mistakes. There is a bidirectional relationship between interpersonal trust and trust at an organisational level (e.g. trust in a clinical service) and trust at an institutional level (e.g. trust in a health care system). Ubuntu’s core principles of interconnection, compassion, respect and communal responsibility that guide towards relational and social harmony, integrate well into medical training and health care delivery by fostering trust. A clinical learning environment that is inspired by these Ubuntu principles can have a significant positive impact on learning and will be addressed in the chapters that follow.

Practice points

- Incorporate Ubuntu principles in postgraduate medical education curricula and pedagogy.
- Create a supportive clinical environment to develop trust.
- Encourage constructive bidirectional feedback between trainee and supervisor.
- Develop faculty to ensure supervisors are effective in facilitating authentic learning opportunities which enhance learning.
- Conscientise supervisors on good role modelling to influence positive trainee professional identity.

■ Declarations

■ Ethical considerations

This chapter did not require ethical clearance or consent as it synthesises existing literature and does not present primary research.

■ Authors' contributions

Tashneem Harris: Conceptualisation, Data curation, Formal analysis, Investigation, Methodology, Resources, Validation, Writing – original draft, Writing – review & editing.

Gerda Botha: Conceptualisation, Data curation, Formal analysis, Investigation, Methodology, Resources, Validation, Writing – original draft, Writing – review & editing.

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Mothahadini Mawela: Conceptualisation, Formal analysis, Project administration, Supervision, Writing – review & editing.

All authors reviewed the chapter, contributed to the discussion of results, approved the final version for submission and publication and take responsibility for the integrity of its findings.

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■ Competing interests

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Chapter 6

Learning in the workplace

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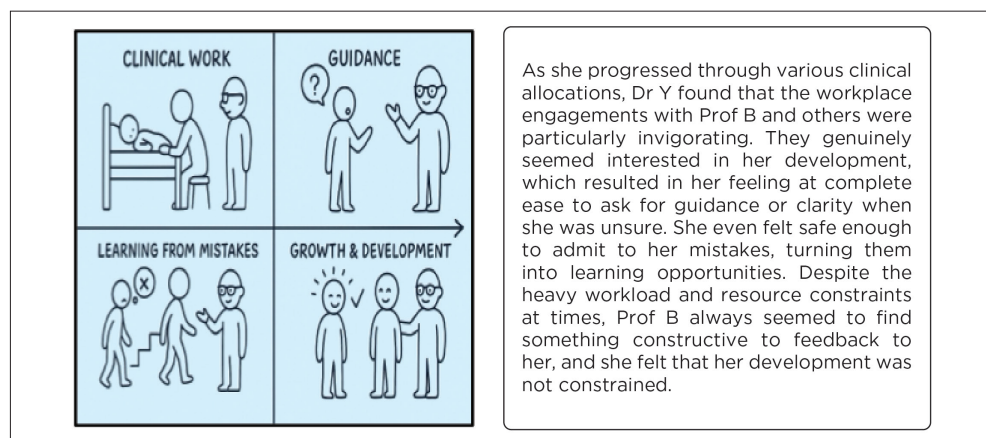
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■ Abstract

This chapter explores the dynamics of workplace-based assessment (WBA) as it relates to learning in the workplace, particularly in specialist medical training, emphasising its role in fostering clinical competence, professional identity and lifelong learning. Grounded in Kolb's experiential learning theory (ELT), the chapter highlights how cyclical processes of concrete experience, reflection, conceptualisation and experimentation transform clinical encounters into meaningful learning opportunities. Feedback is central to WBA, with a paradigm shift advocated from *assessment-of-learning* to *assessment-for-learning*, focusing on developmental growth and entrustable professional activities (EPAs). Practical strategies for effective feedback are outlined, including a four-perspective framework (supervisor, trainee, context, relationship) and the importance of capturing learning encounters in electronic portfolios of learning (ePoLs) or other digital tools. The chapter also examines the clinical learning environment (CLE), identifying enablers and barriers such as personal mindset, social dynamics, organisational policies and resource disparities, particularly in South Africa's overburdened public health sector. Challenges such as racism, sexism and historical inequities are addressed, with calls for inclusive, respectful cultures to support diverse trainees. Professional identity formation (PIF) is explored as a personal and sociocultural process, with innovative suggestions such as 'brand management' to align values and career progression. Key recommendations include integrating reflection into daily practice, empowering trainees to drive their learning and capacitating supervisors through targeted training. By adopting an overarching Ubuntu lens which consistently seeks to humanise all encounters, pedagogical strategies are aligned with relational and



Source: Figure created by Sumaiya Adam (2026).

FIGURE 6.1: Dr Y's professional development.

contextual insights. This chapter advocates for WBA that is not only educationally robust but also equitable and transformative.

■ Introduction

There is a shift in health care professions training globally (Burch 2019). Trainees spend significant training time in different health care settings where they are expected to acquire hands-on experience during real-life patient care encounters. The clinical learning environment (CLE) not only encompasses the physical health care settings, but trainees must deal with the workplace's personal, psychosocial and organisational aspects and emerge with diverse competencies that fulfil current societal needs (So 2023). The learning environment in health care settings determines the engagement and motivation of trainees and may positively impact the achievement of educational outcomes (Mash & Edwards 2020; Vieira 2008).

■ Theory and practice of learning in the workplace

Learning in the workplace is a foundational component of postgraduate medical education, instrumental in cultivating both clinical competence and professional identity (Ahmad et al. 2024; Sathekge 2017). Health care platforms serve as places for contextual learning, where trainees are sensitised to diverse health care challenges and social determinants that shape patient care (Baboolal & Singaram 2023a; Ras et al. 2023). This situated learning promotes the development of socially accountable and culturally attuned specialists prepared to meet the needs of under-resourced health care systems. Clinical environments, including hospitals, clinics, laboratories and community health centres, serve as dynamic learning laboratories where supervision, patient care and peer interactions coalesce to facilitate learning (Swanwick 2005; Yardley, Teunissen & Dornan 2012).

■ Experiential learning theory

Learning in the workplace is most effectively understood through the lens of experiential learning theory (ELT), a model that highlights the centrality of learning through direct engagement and reflection. The theory posits that knowledge is continuously gained through an ongoing process that involves four different types of learning: concrete experience, reflective observation, abstract conceptualisation and active experimentation (Kolb 2015).

- Concrete experience refers to the learner's direct involvement in a task or situation.
- Reflective observation involves stepping back to critically reflect on what happened.
- Abstract conceptualisation entails interpreting those reflections to form general concepts or theories.
- Active experimentation sees the learner applying new ideas or strategies in real-world contexts.

This dynamic process allows trainees to transform experience into structured knowledge, adapting their practices in response to evolving circumstances. In health professions specialist training, ELT finds powerful expression in learning in the workplace, where the clinical environment serves as the primary source of experiential input. For instance, when a trainee engages in a diagnostic procedure or participates in a ward round, they gain a concrete experience. When this is followed by feedback sessions with supervisors or peer debriefings, they move into reflective observation. Through guided discussion and review, they conceptualise the clinical principles underlying the encounter. They then apply this knowledge in future clinical scenarios, thus engaging in active experimentation. This iterative cycle fosters not only clinical reasoning and procedural competence but also the development of metacognitive and adaptive learning strategies (Yardley et al. 2012). Experiential learning theory thus provides a theoretical foundation for the design of educational experiences that are learner-centred, context-specific and transformative. By facilitating learning using the full cycle and aligning learning activities, clinical trainers can intentionally create environments that facilitate deeper learning, enhance decision-making skills and support the integration of theoretical knowledge into practical contexts (Ahmad et al. 2024). This alignment also helps trainees develop the self-awareness and flexibility necessary for professional growth in complex, uncertain clinical environments.

■ **Fostering critical self-reflection and lifelong learning**

As trainees repeatedly confront clinical uncertainty and navigate complex care decisions, they are encouraged to critically examine their assumptions, recognise areas for growth and take ownership of their learning. This self-reflective capacity enables ongoing professional development beyond formal training and promotes adaptability in a rapidly evolving health care environment (Sandars 2009). These key attributes of specialist practice align closely with Schön's concept of the 'reflective practitioner', emphasising reflection both in and on action (Sandars 2009). This reflective stance enhances a trainee's ability to integrate theory with practice,

respond thoughtfully to clinical challenges and evolve as a competent, compassionate and self-directed health care professional.

■ Meeting of trainee and supervisor

■ Feedback at heart of workplace-based assessment

Feedback sits at the core of workplace-based assessment (WBA) in the journey towards entrustment in a particular entrustable professional activity (EPA) (Burgess et al. 2020). Workplace-based assessment makes it possible to give trainees feedback on what they do well, the areas where they still need to improve and to help them develop an action plan for a way forward. The narrative feedback component of WBA carries much more importance than a traditional assessment, which typically includes scoring. When considering the quality of feedback, there needs to be a shift from only technical aspects towards impact on the trainee (Ramani et al. 2019; Ten Cate 2018). The measure of feedback success should be whether feedback positively impacts the trainee's learning.

■ Shifting feedback paradigm

There are excellent guides on what constitutes good feedback and practical implementation tips (Ramani 2003; Ramani & Krackov 2012; Ramani et al. 2019). A key aspect of feedback is shifting the focus from *assessment-of-learning* to *assessment-for-learning* (Burch 2019). It is essential to move away from a learning encounter that focuses on 'what is wrong', to an encounter that actively builds towards required skills in the future.

This needs a mental shift in how we view feedback and a focus on multiple perspectives (Ramani & Krackov 2012). The *supervisor* is responsible for fostering a favourable learning climate and becoming a professional role model for the trainee (see Chapter 3). To give meaningful feedback, the supervisor needs to observe the activity through direct assessment or indirectly through case discussions or product evaluations. Significantly, feedback should facilitate reflection and self-awareness in the trainee. From the perspective of the *trainee*, it is essential to foster a growth mindset, constantly seeking out opportunities to learn and to receive feedback. The trainee is responsible for their learning journey and ensuring they stay on track. From a *context* perspective, institutions need to consider how curricula and systems are created to ensure that they foster self-efficacy and hold the delicate balance between supervision and autonomy. Lifelong learning should be part of the culture with multiple opportunities for professional growth. All this impacts the

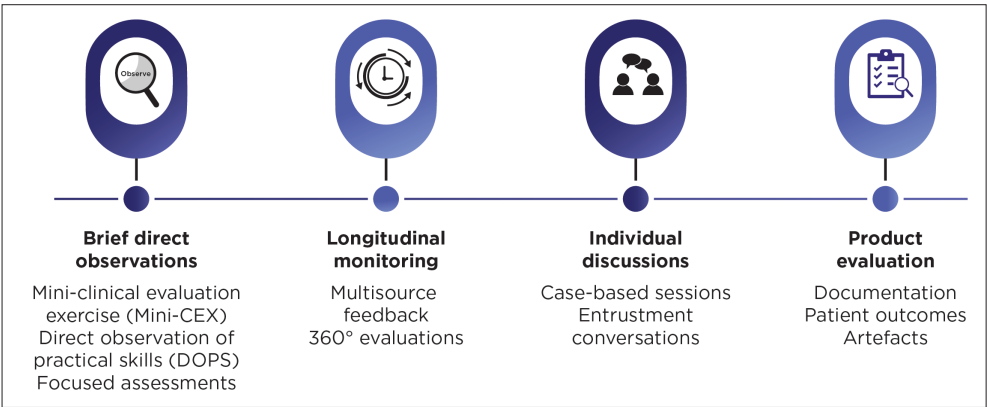
supervisor-trainee relationship, which must be based on mutual trust and an educational alliance (see Chapter 3).

■ Opportunities for workplace-based assessment and feedback

Teaching trainees in the workplace happens every day, and there are many opportunities to turn an ad hoc encounter into a WBA with feedback and the intentional making of an ad hoc entrustment decision. These can be broadly divided into four scenarios, referred to in the context of WBA as four sources of workplace information that support entrustment decisions (Figure 6.2) (Ten Cate et al. 2024).

Direct observation includes any encounter where the supervisor can observe the trainee providing direct care in a clinical setting. This may be observing a trainee at the bedside, whether in the ward, outpatient or emergency department or in a laboratory or even in a mortuary. One can also observe a skill directly, whether examining a patient, doing a procedure or giving an anaesthetic. Direct observations could include a more structured assessment where the supervisor completes a tool like the mini-CEX (mini-clinical evaluation exercise; for consultations) or DOPS (direct observation of procedural skills; for procedures), or be an informal event, for example, where the supervisor is assisting a trainee with the assessment of an ill patient (Norcini & Burch 2007).

A *conversation*, such as an entrustment-based or case-based discussion (CBD), can also be a source of information. A commonly used WBA interaction is the entrustment CBD. Any case or scenario a trainee discusses with a supervisor could evolve into a CBD. The trainee presents the scenario,



Source: Figure created by Sumaiya Adam, adapted from Ten Cate et al. (2024).

FIGURE 6.2: Sources of workplace information that support entrustment decisions.

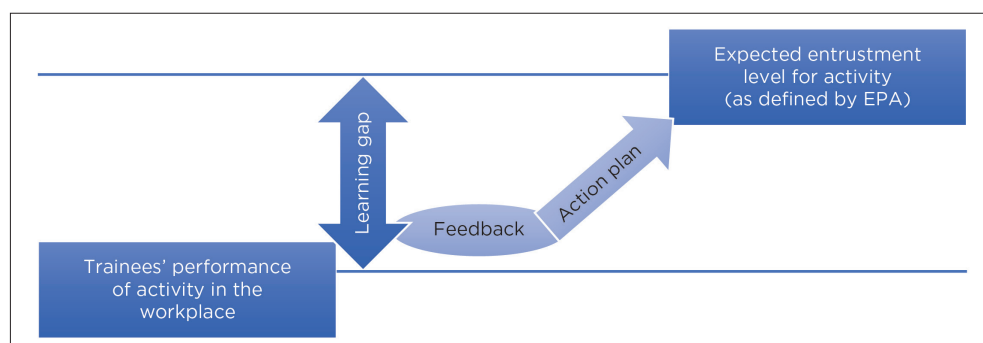
and the supervisor uses this as an opportunity to expand the conversation and probe to assess the trainee's knowledge, understanding and critical reasoning. This allows filling in any gaps (through giving feedback) and to make an entrustment decision on that case or scenario. A case-based discussion is also helpful for non-clinical discussions, for example, when discussing implementing a community project or how a trainee managed a complex team member interaction. An important question during the CBD is 'What if the scenario were different?', attempting to explore predictive competence in a specific area. The case-based discussion provides an opportunity to assess knowledge and its varied applications but is also an excellent learning opportunity for the trainee. As social constructivism highlights, trainees already possess a rich knowledge base and certain capacities. The difference between what a learner can do without help and what they can do with help is described as the zone of proximal development (Kaufman 2018). The case-based discussion provides an opportunity to identify the knowledge or skills the trainee still needs to master and gives a scaffold for specific feedback.

Longitudinal assessments take a longer view. The multi-source feedback (MSF) tool can provide a comprehensive understanding of the attitudes and behaviours of the trainee, such as the agency, reliability, integrity, capability and humility (A-RICH) qualities (Ten Cate & Chen 2020) and relational qualities such as compassion, openness and curiosity. This allows colleagues of the trainee, including supervisors, peers, nurses, multidisciplinary team members and others to give anonymous feedback to the trainee, which can be discussed with the trainee to spark reflection and, where relevant, develop action plans to address gaps. Periodic assessments, such as at the end of a rotation, are also an opportunity for feedback on overall performance and possibly an entrustment decision on specific EPAs.

Lastly, *product evaluation* refers to the assessment of specific outputs of patient care. This could include clinical products such as reports on radiological images or histology and surgical, orthopaedic or dental reconstructions. It can also be the outcome of audits and surveys, such as patient satisfaction surveys or publications in journals or conference proceedings. An important evaluation may be that of a presentation, whether in an academic meeting or at a journal club. It can be viewed as either a product evaluation or a direct observation. Each of these sources of information is an opportunity to give the trainee feedback and make an entrustment decision on a specific activity.

■ Feedback in workplace-based assessment

A variety of models can be used when giving feedback, but in busy workplaces, there are only three core components of effective feedback.



Source: Figure created by Sumaiya Adam (2026).

Key: EPA, entrustable professional activity.

FIGURE 6.3: Using feedback to close the gap between trainee's performance and expected entrustment level for the activity.

The first is identifying what went well. It is essential to reinforce the parts of the activity that the trainee has been successful in. Highlighting what the trainee performed well will reinforce those behaviours in the future. It also empowers the trainee and strengthens their self-efficacy.

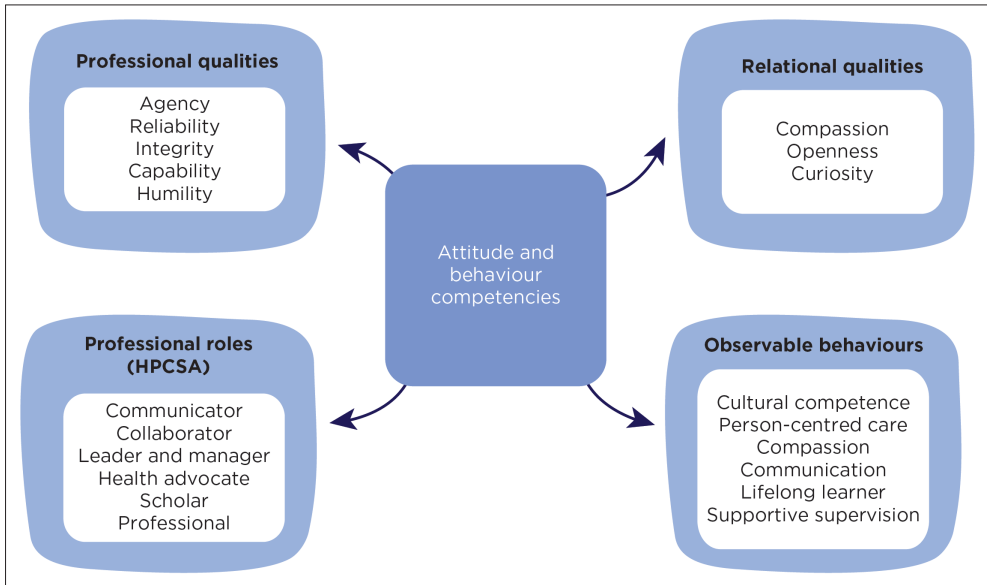
Next, it is essential to identify gaps, whether in knowledge, specific skills, reasoning, attitudes or behaviours. The feedback should describe (rather than judge and/or evaluate) the gaps and why it is important to address them.

Lastly, the supervisor assists the trainee in determining an action plan on how this particular gap will be addressed (Ramani & Krackov 2012) (Figure 6.3). See Appendix 2, *How to give Feedback* for a practical guide.

While working with a trainee, the supervisor can observe relevant professional qualities such as agency, reliability, integrity and humility and the relational qualities of compassion, openness and curiosity (Figure 6.4; see also Chapter 3). When discussing 'what could have been done better', the supervisor can point out behaviours that may have been counter-productive and give practical action plans on how to develop relevant competencies.

■ Role of expert supervisor in feedback conversation

In health professions education (HPE), there must be a move away from the traditional hierarchical power dynamics between the expert supervisor and the novice trainee. Feedback in the context of WBA has the trainee in



Source: Figure created by Madeleine Muller (2026).
 Key: HPCSA, Health Professions Council of South Africa.

FIGURE 6.4: Attitudes and behavioural competencies that can be observed in the trainee.

the driver's seat. In most scenarios, the trainee will choose the activity or product for the supervisor to observe and give feedback. Activities are selected using EPAs to identify their learning needs and design their WBAs accordingly. The trainee takes the lead and is expected to display a high level of self-efficacy in their learning journey.

However, the supervisor must remain vigilant to ensure a trainee is not left behind. During a lengthy postgraduate training programme, trainees might face personal or work obstacles and disengage with their learning. The training programme needs regular reviews (e.g. with a clinical competency committee), where trainees' progress is reviewed and feedback given (see Chapter 8). This ensures early remediation and intervention where necessary (see Chapter 9). In addition, the supervisor needs to be available as an expert to provide feedback and guidance. A key quality of the expert supervisor is humility. Supervisors need to know their limitations and be able to model how to get assistance in areas they are unsure of. An expert is not someone who knows everything, but someone who can manage access to knowledge. Ongoing learning and reading by the expert are essential to ensure awareness of where their gaps are and to refer the trainee to appropriate resources when necessary.

■ Capturing learning encounter in portfolio of learning

Any workplace activity is an opportunity for discussion and feedback. While feedback has always been a part of clinical rotations, what is new in WBA is that these encounters are captured, making it possible to trace trainees' progress. Trainees will collect hundreds of WBAs during their training programme to reach sufficient entrustments for all the EPAs. Therefore, from the first month of training, it is essential that these are captured in an electronic portfolio of learning (ePoL) (see Chapter 7). A workplace-based assessment that is not captured is a missed opportunity to monitor progress. The trainee is responsible for asking for feedback and ensuring these moments are entered into the relevant platform. To be able to collect enough information, a trainee should aim to record at least one to three WBAs *every week*.

■ Capacitating supervisors and trainees in skill of feedback

For the successful rollout of WBA, it is essential to provide targeted training to clinical supervisors on all aspects of WBA, including how to give feedback (Boland et al. 2024; Norcini & Burch 2007). Such training should not only address the practical aspects but also the behavioural and social competencies that are needed to create a conducive learning environment and build respectful supervisor-trainee relationships (Mash et al. 2019). To introduce a culture of feedback, we also need to improve the feedback literacy of trainees, both in requesting and receiving feedback (Ramani et al. 2019). This feedback culture should also be extended to trainers and programme coordinators, who need to model requesting feedback on their own activities.

■ Clinical learning environment

The clinical learning environment is defined as an overlap between the clinical context in which trainees learn and participate in patient care and the educational context, which is guided by curricula, learning objectives, learning outcomes and assessments (Nordquist et al. 2019). The clinical learning environment in South Africa (SA) is characterised by varying human and financial resources, with most of these resources skewed towards the private health sector (Mash & Edwards 2020). This results in high service delivery pressure in the public sector, which is oversubscribed and underfunded, and this is where specialist training takes place. This was described as a contributing factor to gaps in supervision in both the

clinical and laboratory specialist training, in a survey conducted among supervisors and medical specialist trainees where the authors noted that there was less time for training, supervising, assessing and providing feedback. Compounding these were the historical legacies of colonialism and apartheid, with racism, sexism and favouritism cited as pervasive in specialist training. Baboolal and Singaram (2023a, 2023b) concluded that measures to inculcate a mutually respectful, inclusive and collaborative environment would benefit learning and WBA for specialist training in SA.

Throughout this book, we advocate for working towards a clinical environment which is infused with principles of Ubuntu, an indigenous philosophy of being in Southern Africa, foregrounding social harmony through the normalisation of empathy, compassion, kindness, generosity and trust (Tutu 1999). This applies to informal and formal interpersonal interaction, as well as the manner in which organisational activities and policies are enacted.

■ Enablers and barriers in learning environment

A positive CLE enhances learning, while a hostile learning environment inhibits learning and is destructive and may be harmful, associated with depression and anxiety. Specific components of CLE may enable or hinder learning (Gruppen et al. 2018). These include personal, social, organisational, physical and virtual factors. The *personal* component relies on the individual mindsets of trainees, which propel them to drive their learning, achieve personal growth and develop a professional identity. The *social* component is how interpersonal relationships drive and impact learning. These may be among peers (trainees) or supervisors, trainees and supervisors and among trainees, supervisors and patients (Chapter 3). The *organisational* component includes a myriad of factors such as regulations, policies, structuring of the curriculum or training programme, accreditation, duty and learning schedules and institutional culture. The *virtual and physical* environment includes physical spaces and virtual (digital) infrastructure. Time constraints and work volume overload with staff shortages were cited as barriers to an enabling learning environment in a survey conducted on supervisor perspectives on WBA in SA (Ras et al. 2023).

■ Professional identity in workplace learning

Professional identity formation (PIF) is defined as a process undergone by a novice to identify as a member of a profession (Branzetti et al. 2025). It is influenced by socio-political factors, social constructs, social media and emotional intelligence. As individuals engage and are socialised in the

medical community, they acquire certain norms to be deemed acceptable in culturally dominant identities such as maleness, whiteness and heterosexuality. One of the challenges of competency-based education is reconciling the aim of inclusivity for diverse trainee populations with the need to define a single, identifiable way to be a competent physician (Frost & Regehr 2013). Structural inequalities and dominance by certain cultural groups in medicine are well-documented in South African history and go beyond race. There is an increased awareness of the challenges facing foreign students (Motala & Van Wyk 2019), Lesbian, Gay, Bisexual, Transgender, Intersex, Queer, Asexual and + (LGBTIQA+) students (Mkhize et al. 2024) and neurodiverse students (Nthibeli, Griffiths & Bekker 2025). A study which explored the experiences of recently qualified black medical specialists in SA in 2016 emerged with four main themes, namely: racism, tokenism, institutional obstacles to career development and male-centredness. In this study, the term 'black' incorporated the apartheid racial categories black Africans, mixed race and Indian. Study participants reported experiencing racism from colleagues, patients and/or their family members. They resented being perceived as being undeserving recipients of affirmative action policies. They expressed a need for more transparency in rotation schedules and opportunities for career advancement in the workplace. Female trainees felt obliged not to be vocal about issues that affected them as the learning environment at the specialist level was male-dominated (Thackwell et al. 2016). Since this study was published, there has been a rapid influx of non-South African trainees into training programmes, which adds to the complexity of an already diverse population. Workplace-based assessment provides both risks (bias and discrimination) and opportunities to identify and accommodate the diverse needs of our students, and these needs require further exploration and research.

The more recent emphasis on professional identity in HPE has had a positive impact, with trainees from various backgrounds and cultures becoming socialised into the medical community. It is proposed that trainees should be empowered to change some of the established norms in medicine that no longer serve their purpose, towards more diverse, inclusive, authentic and humane norms (Sternszus et al. 2024). The major contributors to identity include skills, purpose, values and beliefs. Brand management principles, including brand identity, brand delivery, brand experience and brand image, are applicable in this case. When these are aligned in terms of how physicians see themselves and how they are perceived, there is positive brand equity. Positive brand equity is associated with career fulfilment, while brand misalignment may result in career stagnation, burnout or impostor syndrome. It would be beneficial if everyone performed a brand audit to understand who they are, their purpose, values and beliefs and their reputation (Branzetti et al. 2025).

■ Conclusion

While this chapter focused on learning in the workplace and feedback, these do not occur in isolation. Chapter 3 outlined the relational, emotional and cultural contexts in which supervision and assessment occur. Ubuntu-inspired feedback is not merely a technical exercise – it is a deeply social exchange that affirms personhood, enhances trust and builds critical awareness of power. Recognising these dimensions enriches our understanding of how WBAs and feedback conversations can either reinforce or challenge the professional identities of trainees. Integrating the insights from Chapter 3 and Chapter 6 into feedback practices ensures that educational encounters are not only effective but also inclusive, respectful and transformative.

Practice points

- Integrate experiential learning into daily practice.
- Promote critical self-reflection.
- Make feedback developmental, not judgemental.
- Use a four-perspective feedback framework.
- Empower the trainee to drive learning.
- Capture learning consistently and meaningfully.
- Train the supervisors and trainees.
- Create an enabling clinical learning environment.

■ Declarations

■ Ethical considerations

This chapter did not require ethical clearance or consent as it synthesises existing literature and does not present primary research.

■ Authors' contributions

Madeleine Muller: Conceptualisation, Visualisation, Writing – original draft, Writing – review & editing.

Veena S Singaram: Conceptualisation, Visualisation, Writing – original draft.

Abegail Dlova: Conceptualisation, Writing – original draft.

Mothahadini Mawela: Writing – original draft.

All authors reviewed the chapter, contributed to the discussion of results, approved the final version for submission and publication and take responsibility for the integrity of its findings.

■ **Artificial intelligence-assisted content generation**

This book includes cartoons, figures and visual elements that were created with the assistance of artificial intelligence tools, including ChatGPT and Canva. Sumaiya Adam directed the generation process and reviewed all outputs to ensure accuracy, relevance and alignment with the content of the book.

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■ **Disclaimer**

The views expressed in this chapter are the authors' own and not an official position of the institution, funder or the publisher.

■ Appendix 1

■ Practical tips for workplace learning and feedback

□ Integrate experiential learning into daily practice

- Structure teaching moments during rounds or procedures.
- After clinical events, prompt trainees to reflect (e.g. 'What went well? What would you do differently?').

□ Promote critical self-reflection

- Allocate time for reflective writing or debriefing sessions.
- Ask open-ended questions that promote metacognitive skills: 'How did you feel about your clinical decision-making?' or 'What assumptions did you bring into that situation?'
- Model your own reflective thinking and clinical reasoning aloud.

□ Make feedback developmental, not judgemental

- Frame feedback as '*supporting growth*' rather than '*fixing mistakes*'.
- Use the language of '*not yet entrustable*' instead of '*failing*'.
- Tie feedback to specific EPAs and help trainees set small, achievable goals.

□ Use a four-perspective feedback framework

- *Supervisor*: Observe meaningfully, role model and communicate with empathy.
- *Trainee*: Encourage proactive seeking of feedback and a growth mindset.
- *Context*: Build institutional systems that support structured feedback and portfolio capture.
- *Relationship*: Prioritise trust, safety and mutual respect.

□ Empower the trainee to drive learning

- Let trainees choose which clinical activities to be observed on and ask for specific feedback.
- Encourage weekly goal-setting and reflective review of performance.
- Reinforce their responsibility in documenting WBAs.

□ Capture learning consistently and meaningfully

- Establish the habit of regular recordings of WBAs from the start of training.
- Use digital tools to log learning moments (e.g. case discussions, journal clubs, procedures).
- Supervisors should routinely review ePortfolio entries to monitor progress and offer guidance.

□ Train the supervisors and trainees

- Provide structured training on how to give and receive feedback, manage bias and support PIF.
- Include sessions on emotional competence, humility in supervision and navigating difficult conversations.
- Make faculty development an integral part of continuous professional practice.

□ Create an enabling clinical learning environment

- Promote inclusive, respectful workplace cultures that challenge racism, sexism and favouritism.
- Balance supervision and autonomy by clarifying roles and expectations.
- Address resource limitations transparently, advocating for protected teaching time.
- Support trainees in aligning their professional values with personal authenticity.

■ Appendix 2

■ How to give feedback as part of a workplace-based assessment

□ Identify a feedback opportunity (workplace-based assessment)

Option 1 The trainee invite the trainer to a WBA, e.g. do an observation of a consultation/procedure etc.	Option 2 The trainer invites the trainee to a WBA, e.g. to reflect on a multi-source feedback	Option 3 Ad hoc interactions in the workplace become an opportunity for feedback, e.g. on a ward round
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□ Set the scene

- Ensure the environment is in a private location with limited distractions.
- Proactively create a learning climate built on *mutual trust and respect*: a collaborative relationship (Ubuntu).
- Be a *professional role model: A-RICH* (agency, reliability, integrity, capability, humility).

□ Communicate goals and set clear expectations

- Orient the trainee on the goals and agenda of the interaction and that feedback will be given.
- Frame feedback as part of an *educational alliance*.

□ Do a workplace observation: Four sources of information for a workplace-based assessment

Directly observe consultation / procedure / interaction (optional use of a tool e.g. miniCEX, DOPs)	Discuss a case/scenario Do an entrustment-based case discussion	Do longitudinal review e.g. discuss a multi-source feedback / end-of-rotation assessment	Do a product review e.g. watch an academic presentation, look at a radiology report
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□ Give feedback

What went well Trainer comments on what went well. Reinforce strengths	What could have been done better: identify gaps Adopt a respectful, supportive tone and use precise, descriptive language	Define an action plan on how to close the gap: focus on behaviours the trainee can modify and control (collaboratively)
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□ Capture the data

- Capture the WBA in an appropriate tool (preferably digitally).
- Describe the activity and link it to a specific EPA.
- Make an entrustment decision.
- Record the feedback on the WBA tool: What went well / What could have been done better / Action plan.

Information systems

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■ Abstract

Information systems have become indispensable for effective workplace-based assessment (WBA) in medical specialist training, fundamentally transforming how assessment data are collected, analysed and utilised within competency-based medical education (CBME). This chapter examines the critical role of robust information systems in enabling the transition from assessment as documentation to assessment as educational intelligence, with particular focus on the South African medical education context.

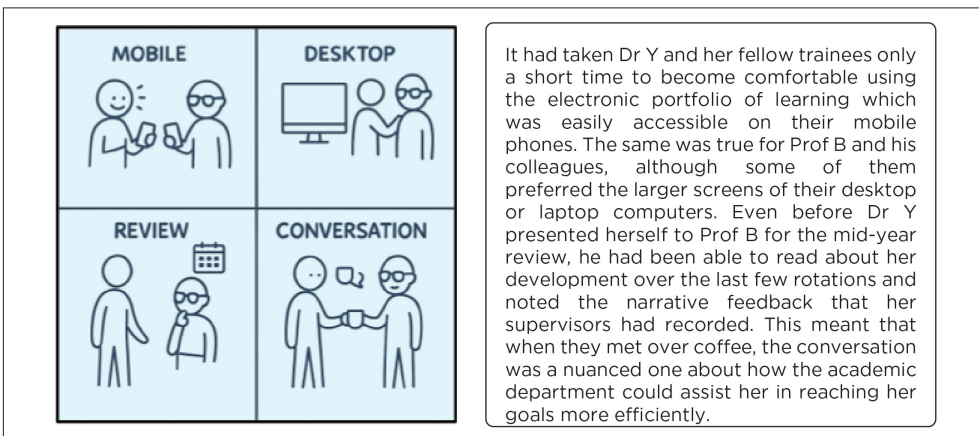
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Drawing on evidence from learn@CMSA (the learning management system of the College of Medicine of South Africa), Canadian CBME systems and international literature, the chapter introduces a comprehensive data flow process, mapping systematic progression from workplace observation generation through to clinical competency committee (CCC) outcomes. This framework demonstrates how effective information systems transform scattered workplace observations into coherent developmental narratives by aggregating multiple low-stakes assessments across time and context, addressing limitations of traditional high-stakes examination approaches prevalent in South African medical specialist training.

The evolution from paper-based to technology-enabled assessment systems is critically examined, highlighting opportunities and challenges for resource-constrained environments. Mobile applications, electronic portfolios of learning (ePoL) and data visualisation tools are presented as solutions enhancing point-of-care assessment while reducing administrative burden. Implementation considerations for South African teaching hospitals include strategies for offline functionality, cost-effective platform development and collaborative system design approaches.

Emerging artificial intelligence (AI) applications are explored, from natural language processing (NLP) of narrative feedback to predictive analytics for early identification of struggling trainees. The chapter addresses ethical considerations around transparency, bias mitigation and data privacy, referencing South African data protection requirements.

Investment in well-designed information systems represents a fundamental enabler of evidence-based trainee development and enhanced



Source: Figure created by Sumaiya Adam (2026).

FIGURE 7.1: Dr Y learns to use the electronic portfolio of learning.

patient safety through reliable assessment of clinical competence, offering particular value for training graduates fit for purpose across South Africa's varied health care contexts.

■ Introduction

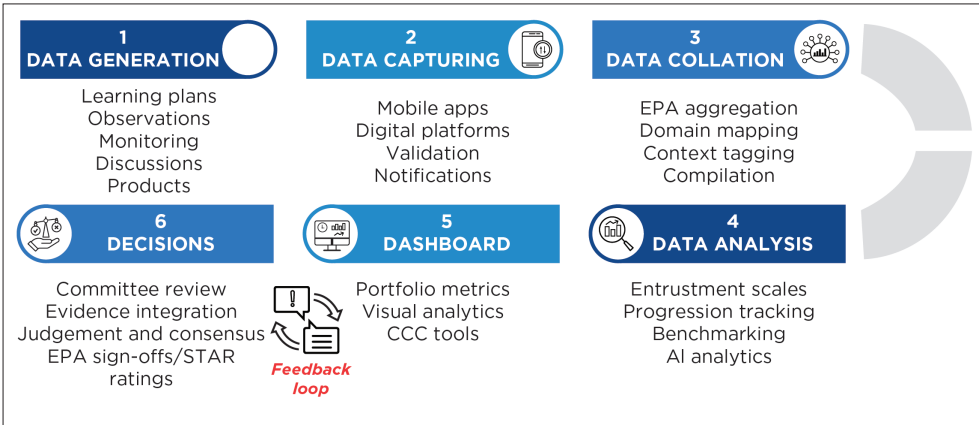
Information systems form the backbone of modern competency-based medical education (CBME), yet their critical role in workplace-based assessment (WBA) is often underappreciated until programmes attempt to make defensible entrustment decisions without adequate data infrastructure. The shift from time-based to competency-based training has fundamentally altered the evidentiary demands placed on assessment systems, requiring the collection of multiple data points from workplace observations. These data need to be systematically aggregated, analysed and interpreted over the trainee's period of study.

What distinguishes effective assessment programmes is not simply the volume of data they collect, but how thoughtfully they design information systems that transform scattered observations into reliable and coherent pictures of professional development. This transformation requires a systematic data flow process that moves seamlessly from workplace generation through to clinical competency committee (CCC) outcomes and trainee development.

This chapter examines how robust information systems enable the transition from assessment as documentation to assessment as educational intelligence, exploring the practical challenges and emerging opportunities that define the current landscape of WBA technology. From the foundational question of why systematic data collection matters through to the frontier applications of artificial intelligence (AI), we consider how information systems can either enable or constrain the educational potential of programmatic assessment approaches.

■ Data flow process in workplace-based assessment

The effectiveness of any WBA information system depends on a clear understanding of how data moves through the assessment ecosystem. The data flow process described in Figure 7.2 has been validated through multiple sources, including learn@CMSA (the learning management system of the College of Medicine of South Africa), international literature on CBME and operational systems described in peer-reviewed publications.



Source: Waseela Khan's own work, adapted from Marty et al. (2023), Canadian competency-based medical education systems and CMSA implementation models.

Key: EPA, entrustable professional activity; STAR, statement of awarded responsibility; CCC, clinical competency committee; AI, artificial intelligence; CMSA, Colleges of Medicine of South Africa.

FIGURE 7.2: Evidence-based workplace-based assessment data flow process.

■ Importance of data in training

The question of what constitutes sufficient evidence for entrusting a trainee with independent clinical responsibility has never been more complex or more critical. As clinical competency committees grapple with progression decisions, the limitations of traditional assessment approaches become starkly apparent. A trainee may excel in formal examinations yet struggle with clinical judgement under pressure. Another may demonstrate exceptional procedural skills but fail to communicate effectively with nursing staff. These disconnects highlight a fundamental problem: we have been asking individual assessments to bear more weight than they can reasonably carry.

These challenges are particularly acute in South African health professions education (HPE), where trainees often work across diverse health care settings with varying resource constraints, patient populations and technological capabilities. The traditional reliance on high-stakes examinations and subjective supervisor impressions proves inadequate for capturing the complexity of professional competence required for independent practice in these varied contexts.

Systematic data collection transforms assessment from snapshot judgements to a longitudinal understanding of professional development. Rather than relying on isolated high-stakes events, robust information systems enable the aggregation of multiple ad hoc low-stakes observations into comprehensive pictures of trainee competence (Van der Vleuten et al. 2015). These developmental signatures require systematic data capture to detect and address trainee competence (Warm et al. 2016).

The 2018 Ottawa Consensus Statement crystallised our understanding of robust assessment by identifying seven essential components: validity, reliability, equivalence, acceptability, credibility, feasibility and educational effect (Norcini et al. 2018). Quality data systems are essential for addressing each of these components. Without systematic collection, storage and analysis of assessment data, validity arguments weaken, reliability becomes questionable and the educational impact of assessment diminishes.

Workplace-based assessment data serve interconnected purposes that extend far beyond simple documentation of individual trainee activities. The longitudinal nature of trainee development makes sequential data collection particularly powerful. When supervisors can access comprehensive records of a trainee's development over months and years, patterns become visible that would otherwise remain hidden in isolated observations. A trainee might demonstrate consistent growth in technical skills while plateauing in communication competencies or show rapid advancement in routine cases while struggling with complex decision-making under pressure.

This longitudinal perspective fundamentally changes how feedback functions in health professions education. Rather than offering generic observations about individual encounters, supervisors equipped with comprehensive assessment data can provide precisely targeted developmental guidance. The granular nature of well-structured assessment data enables this specificity, transforming feedback from pleasant but ineffective generalities into actionable developmental planning (Kogan et al. 2017).

Perhaps most critically, systematic data collection provides the evidentiary foundation for high-stakes progression decisions that CCCs must make with confidence. The shift towards competency-based training has created unprecedented responsibility for these committees, which must determine not only whether trainees have completed the required activities but also whether they demonstrate readiness for independent professional practice. When committees have access to aggregated data from multiple supervisors across diverse clinical contexts, their decisions rest on solid foundations rather than limited anecdotal impressions (Hauer et al. 2016).

■ Programme-level intelligence

The educational value of assessment data extends beyond individual trainee development to programme-level improvement. Patterns across cohorts of trainees can reveal systematic strengths and weaknesses in curriculum design, teaching methods and learning experiences. Assessment data become a powerful diagnostic tool for identifying these systemic issues, enabling evidence-based refinements to training programmes

(Van der Vleuten et al. 2015). Additionally, trainees empowered through access to their assessment data can track their progress across multiple competency domains, becoming active partners in their own development rather than passive recipients of external evaluation (Lockyer et al. 2017).

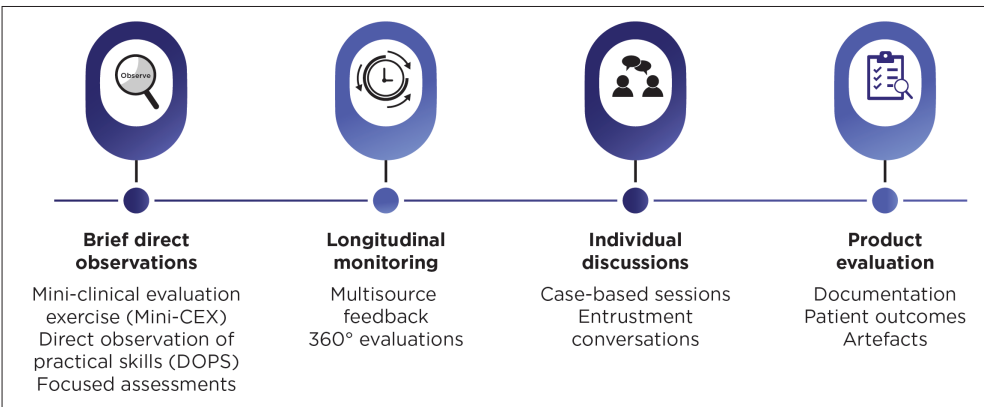
The emergence of entrustable professional activities (EPAs) as organising frameworks for CBME has exponentially increased these data requirements. Entrustment decisions represent perhaps the most consequential judgements in medical education – determining the level of supervision required for patient safety while maximising learning opportunities. Such decisions cannot rely on intuition or limited observations but rather demand a systematic synthesis of evidence from multiple sources and contexts (Ten Cate et al. 2016).

■ Generating data in the workplace

The clinical workplace presents rich opportunities for generating meaningful assessment data; however, several factors influence the quality and quantity of data collected. Effective information systems must accommodate various data sources and formats to create comprehensive pictures of trainee competence.

■ Data sources

Chapter 2 establishes the four key sources of information that support sound entrustment decisions about EPAs: brief direct observations, longitudinal monitoring, individual discussions and product evaluation (Figure 7.3). This chapter focuses specifically on how information systems capture, store, analyse and make meaningful use of the data generated from these sources.



Source: Figure created by Sumaiya Adam, adapted from Ten Cate et al. (2024).

FIGURE 7.3: Four sources of information in the workplace.

Each source type presents distinct challenges for information system design. Brief direct observations (such as mini-clinical evaluation exercises [mini-CEX] and direct observation of procedural skills [DOPS] as described in Chapter 2) generate high-frequency, structured data points that benefit from mobile capture capabilities.

Longitudinal monitoring, including multisource feedback, requires systems that can aggregate observations from multiple contributors over extended time periods. Individual discussions, being less structured, challenge systems to capture qualitative insights without burdensome documentation requirements. Product evaluation requires integration with electronic health records and other workflow systems.

Information systems must accommodate all four sources, creating comprehensive assessment pictures without imposing administrative burden on supervisors. The quality and usability of these systems directly affect whether the four-source framework detailed in Chapter 2 can be effectively implemented in practice.

■ Data quality

Ensuring data quality represents a fundamental challenge in WBA systems, as the validity of entrustment decisions depends entirely on the reliability and completeness of collected assessment data. Effective information systems must incorporate automated validation processes that flag incomplete assessments, prompt supervisors for specific rather than generic narrative feedback and monitor inter-rater reliability patterns that may indicate calibration issues among faculty assessors (Oudkerk Pool et al. 2018). The immediacy of mobile assessment reduces retrospective (recall) bias and increases the fidelity of observations, but systems must also address the quality of brief observations by ensuring assessments focus on specific, clearly defined EPAs using entrustment-supervision scales that translate directly to clinical practice decisions (Cheung et al. 2022). Poor-quality or incomplete assessments undermine the educational value of programmatic approaches, requiring systems to balance the need for systematic data collection with recognition that meaningful assessment cannot be mandated through technology alone, but must be supported through ongoing faculty development and quality monitoring processes that identify and address systematic weaknesses in assessment practices (Van der Vleuten et al. 2015).

■ Diverse professional perspectives

Data from diverse professional perspectives enrich the assessment picture and strengthen validity arguments. While physicians commonly serve as

primary supervisors, valuable insights emerge from nurses, allied health professionals, patients and peers. Each stakeholder observes different facets of trainees.

■ Managing the formative-summative tension

Managing the formative-summative tension requires systems that recognise learner agency in maintaining their own portfolios. Rather than viewing all workplace observations as automatically binding summative evidence, learners benefit from opportunities to curate the body of evidence that documents their professional development. This agency operates through several mechanisms: learners can initiate assessments aligned with their current learning goals, request observations on specific competencies and select evidence that demonstrates patterns of development over time. Such control over evidence collection and organisation – the opportunity to exercise meaningful agency within the assessment programme – directly reduces learners' perception of individual assessments as high-stakes judgements. This interpretation aligns with Schut et al. (2018, p. 660), who identified learner agency as key for understanding learners' perception of assessment stakes, particularly through opportunities to 'influence assessment outcomes, to collect evidence and to improve'. The authors found that learners experienced lower assessment stakes when they could control what evidence was collected and included in their portfolios, not when they could selectively remove observations. Importantly, this agency operates prospectively through active participation in choosing which assessments to undertake and requesting observations on specific competencies, rather than retrospectively removing unfavourable evidence after the fact. Critically, exercising such agency does not undermine the validity of programmatic assessment. Rather, it strengthens validity by fostering learner engagement with the assessment process itself. When learners actively participate in curating evidence of their development, they become co-creators of the longitudinal narrative that informs entrustment decisions. This represents a purposeful synthesis of multiple observations into a coherent developmental trajectory that both learner and assessor can interpret and act upon. The integrity of programmatic assessment depends on the comprehensive aggregation of all collected observations across time and context. Allowing learners retrospective control over which observations are included would compromise this fundamental principle. Instead, prospective agency – the ability to shape assessment collection – provides meaningful autonomy while maintaining the evidential foundation required for defensible entrustment decisions.

■ Methods of storing data: Paper versus technology

The evolution from paper-based to digital assessment systems represents a significant advancement in WBA capabilities. Each approach presents distinct advantages and challenges for data storage and management, which must be carefully considered in various institutional contexts.

■ Paper-based systems

Paper-based systems offer several practical advantages, including low initial implementation costs, minimal technical barriers for users and independence from infrastructure requirements such as network connectivity (Cheung et al. 2022). They potentially provide greater space for detailed narrative feedback and remain accessible in environments with limited technological resources. However, these apparent advantages quickly become limitations as assessment volume increases (Cheung et al. 2022).

The labour-intensive nature of managing paper records often leads to reduced data utilisation, with valuable assessment information remaining effectively siloed in individual forms rather than contributing to cohesive pictures of trainee development. Physical storage requirements create security concerns, while data aggregation and pattern recognition become increasingly complex. Clinical competency committees face cumbersome access challenges and the potential for documents to be misplaced or damaged creates additional risks. Perhaps most significantly, paper systems provide a limited ability to visualise progression over time or track completion rates effectively (Williams et al. 2014).

■ Technology-based systems

Technology-based systems offer compelling advantages that address many of the limitations of paper-based approaches. Centralised storage with secure access controls enables real-time data aggregation and visualisation while enhancing accessibility for all stakeholders. Automated tracking of assessment completion, integration capabilities with other educational platforms and support for longitudinal tracking represent significant improvements over paper systems. Environmental sustainability and reduced physical storage requirements provide additional benefits.

However, technology implementation requires careful attention to costs, user training needs and dependency on reliable infrastructure. Technical failures or data breaches pose risks that institutions must manage through

appropriate safeguards. Poorly designed interfaces may inadvertently constrain narrative feedback, while interface design choices can significantly influence assessment quality and user satisfaction.

Technology-based systems span a spectrum from basic electronic forms to sophisticated learning management systems with integrated assessment portfolios. The most effective digital platforms strike a balance between user-friendly interfaces and robust data management capabilities, enabling meaningful analysis while maintaining ease of use in busy and resource-constrained clinical environments (Marty et al. 2023). However, even cost-effective solutions require investment in infrastructure, ongoing technical support and sustained faculty development – costs that may strain already-limited institutional budgets in South African teaching hospitals.

However, technology implementation requires careful attention to significant practical barriers that are often underestimated in the literature. Beyond initial costs, sustained infrastructure requirements present ongoing challenges: systems depend on reliable network connectivity, regular maintenance and technical support – dependencies that may not be sustainable in under-resourced settings. User adoption presents formidable barriers; supervisors accustomed to informal feedback processes require not merely technical training but fundamental shifts in assessment culture and practice. The learning curve is substantial and time-consuming: faculty development must extend beyond basic system operation to encompass recalibration of assessment philosophy, consistent interpretation of entrustment scales across supervisors and troubleshooting of technical issues that could otherwise undermine user engagement. These barriers are not merely logistical but deeply human: resistance to new technologies, anxiety about unfamiliar interfaces in already-busy clinical environments and concern that technology may depersonalise assessment relationships represent genuine obstacles to meaningful implementation (Ras et al. 2023). Poorly implemented technology systems can paradoxically increase administrative burden for already stretched clinical staff, undermining rather than supporting assessment quality.

■ Leveraging technology for accurate assessment

■ Mobile applications: Enhancing point-of-care assessment

Technology transforms WBA from isolated observations into systematic, analysable data that support sound educational decisions. Effective technological solutions enhance accuracy and utility across the assessment cycle through several key mechanisms.

Mobile applications address one of the fundamental challenges in WBA: capturing observations at the point-of-care without disrupting clinical workflows. Well-designed mobile interfaces enable quick completion of assessments during clinical activities, support offline data collection with later synchronisation and provide just-in-time access to assessment criteria and benchmarks (Cheung et al. 2022). The immediacy of mobile assessment reduces retrospective bias and increases the fidelity of observations. When supervisors can complete assessments in real time rather than hours or days later, the accuracy of both ratings and feedback improves significantly. Time-stamped real-time assessments also increase assessment data integrity and reliability by making retrospective fabrication or falsification of assessment records more difficult to conceal, thereby protecting the validity of the programmatic assessment system itself.

■ Time-efficient assessment capture

Studies demonstrate that WBA using mobile applications can be remarkably time-efficient, averaging just three minutes per instance, which significantly diminishes arguments about time constraints (Cheung et al. 2022). Different modalities for mobile application use provide flexibility to accommodate various workplace contexts and supervision models (Cheung et al. 2022). These include supervisor assessment completed on the supervisor's device, provisional self-assessment where trainees evaluate themselves before supervisor confirmation, trainee-initiated direct access through QR codes and simultaneous self and supervisor assessment for immediate comparison.

■ Electronic portfolios of learning: Centralised assessment repositories

Electronic portfolios of learning (ePoLs) serve as central repositories for assessment data, supporting both formative development and summative decision-making. For trainees, portfolios provide consolidated views of all assessment data, tools for self-assessment and reflection, progress tracking against competency milestones, and evidence collection for advancement decisions. For supervisors and programme directors, they offer comprehensive views of trainee performance across contexts, flagging concerning patterns and providing documentation to support remediation plans and data for programme evaluation and improvement (Jenkins et al. 2024).

■ From passive storage to active learning instruments

Electronic portfolios of learning most effectively support learning when they transcend simple data storage to become interactive platforms that

encourage engagement with assessment data through reflection activities and goal-setting tools. Electronic portfolios of learning have the potential to transform portfolios from passive repositories to active learning instruments (Oudkerk Pool et al. 2018).

■ **Data visualisation: Transforming information into educational insights**

Data visualisation transforms raw assessment information into meaningful patterns that inform educational decisions. Progression graphs illustrating development over time, competency heat maps highlighting strengths and gaps, comparison benchmarks against programme expectations and multi-source feedback (MSF) integration showcasing diverse perspectives provide immediate insights into trainee development. Interactive dashboards enable users to explore data from various angles, fostering a nuanced understanding of competence development and helping CCCs identify areas of concern that may be obscured in text-based reports (Warm et al. 2016).

■ **Entrustment decision dashboards and digital credentialing**

One valuable visualisation approach provides overviews of entrustment decisions, showing the specific supervision levels for each EPA under which trainees are qualified to act. Such dashboards serve multiple purposes: supporting decision-making in CCCs, providing targeted aggregated feedback to trainers and displaying the scope of practice for clinical teams. Digital badges representing Statements of Awarded Responsibility (STAR) can show the scope of practice at specific supervision levels, creating forms of micro-credentialing visible to relevant stakeholders such as clinical staff and nursing teams, potentially enhancing patient safety through clear communication of trainee capabilities (Ten Cate, Schwartz & Chen 2020).

■ **Implementation strategies: Addressing practical challenges**

Successfully implementing technological solutions requires addressing practical challenges, including user adoption, technical considerations, training and support and cost management. Identifying and training champions who demonstrate value and provide peer support, developing intuitive interfaces that minimise cognitive load in busy clinical environments and ensuring offline capabilities for areas with limited connectivity represent essential implementation strategies.

■ Contextual considerations for South African settings

Implementation decisions must consider contextual factors, particularly in resource-constrained settings such as many South African teaching hospitals, where unique challenges exist. Available financial resources, existing technological infrastructure (including internet access), user digital literacy and the scale of assessment programmes all influence optimal approaches. In low-resource settings, strategies might include local design of cost-effective platforms using existing tools, applications with offline functionality that synchronise when connectivity becomes available and strategic collaboration between institutions to share development costs.

Even in resource-constrained environments, paper-based systems are generally discouraged because of their limitations. Creative technological solutions that address local constraints while providing foundations for continuous improvement in assessment practices represent preferable approaches (Ras et al. 2023).

■ Evaluation and quality assurance: Measuring system effectiveness

The success of WBA information systems cannot be assumed from their technological sophistication alone but must be systematically evaluated through meaningful metrics that demonstrate educational impact and operational efficiency. Key performance indicators should include assessment completion rates across different clinical contexts, the quality and specificity of narrative feedback as measured through natural language processing (NLP) tools and evidence of improved entrustment decision-making confidence among CCCs (Hauer et al. 2016).

■ Educational outcomes and user satisfaction metrics

System effectiveness extends beyond data collection to measurable educational outcomes, requiring evaluation of whether enhanced assessment data translates into more targeted developmental feedback, earlier identification of struggling trainees and reduced time-to-competency for successful trainees (Warm et al. 2016). Additionally, user satisfaction metrics must monitor both supervisor engagement with assessment processes and trainee perceptions of feedback quality, as even technically robust systems fail to achieve educational objectives when stakeholders perceive assessment as burdensome rather than valuable (Lockyer et al. 2017). Regular evaluation cycles should assess not only system performance but also the alignment between assessment data patterns and subsequent

clinical competency, establishing the crucial validity argument that WBA systems predict readiness for independent practice.

■ Faculty development in using technology

Successful implementation of WBA information systems requires comprehensive faculty development that extends beyond basic technical training to fundamental shifts in assessment culture and practice. Supervisors accustomed to informal feedback conversations must develop skills in providing specific, actionable narrative comments within digital platforms while maintaining the educational relationships that make WBA meaningful (Kogan et al. 2017). Training programmes must address common resistance patterns, including concerns about increased administrative burden and fears that technology will depersonalise assessment interactions, by demonstrating how well-designed systems enhance rather than replace meaningful educational conversations.

Faculty development should include calibration exercises using the platform to ensure consistent interpretation of entrustment scales across supervisors, regular updates on system features that improve assessment efficiency and ongoing support for troubleshooting technical issues that could otherwise undermine user adoption (Norcini et al. 2018). Most critically, faculty must understand their role in transforming scattered observations into the systematic evidence required for defensible entrustment decisions, recognising that technology serves as an enabler of sound educational practices rather than a substitute for thoughtful observation and meaningful feedback conversations.

■ Stakeholder perspectives

The success of WBA systems depends not only on faculty engagement but also on the perspectives of other key stakeholders. Trainees' experiences of these systems have a direct impact on how they engage with feedback and development opportunities. When digital platforms are seen as high-stakes monitoring tools rather than learning aids, trainees may become defensive or disengaged. In contrast, systems that promote trainee agency by providing access to feedback, tracking progress and allowing some control over portfolio content can encourage self-directed learning and a stronger sense of ownership (Lockyer et al. 2017; Schut et al. 2018). These systems are most effective when they support feedback literacy and help create a safe environment for reflection and growth.

This interpretation aligns with Schut et al. (2018, p. 660), who identified learner agency as 'key for understanding learners' perception of assessment stakes', particularly through opportunities to 'influence assessment outcomes, to collect evidence and to improve', as alluded to earlier in this chapter.

Administrative and information technology staff also play a critical role in supporting these systems. Their involvement in managing user access, maintaining data security, troubleshooting issues and training users ensures that the system functions reliably and meets its educational purpose. A collaborative approach to implementation that includes administrators, trainees and faculty enhances adoption and promotes alignment between technical infrastructure and the goals of WBA (Hauer et al. 2016).

■ Artificial intelligence in assessment

Artificial intelligence represents the frontier of technology in WBA, offering opportunities to enhance both efficiency and effectiveness while raising important questions about the appropriate role of automation in evaluating human competence. Artificial intelligence can be strategically deployed in WBA through automated analysis of narrative evaluations to support EPA progression decisions and identify at-risk trainees (Gordon et al. 2024). Additionally, AI applications can enable comprehensive milestone tracking through NLP of workplace observations, providing personalised feedback and competency mapping across EPAs.

This distinction is critical: AI can only amplify existing assessment quality, not create it. The risk of over-investing in AI-driven automation without first establishing robust assessment standards and supervisor calibration is substantial. Institutions may inadvertently create ‘drive-through’ assessment systems characterised by rapid data processing that masks underlying deficiencies in assessment rigour. Such systems can provide the appearance of systematic evidence-based decision-making while generating voluminous but unreliable data. Meaningful implementation of AI in WBA demands disciplined attention to foundational assessment quality first, technological enhancement second.

A critical prerequisite for effective AI application in assessment must be explicitly stated: AI cannot compensate for foundational inadequacies in supervision quality, assessment rigour or feedback delivery. The principle of ‘garbage in, garbage out’ applies directly to AI systems used in medical education assessment. If supervisors provide poor-quality feedback, lack a standardised understanding of entrustment scales, or engage in inadequate workplace observation, no AI system can transform these deficient inputs into meaningful assessment intelligence. Conversely, if assessment data quality is compromised by inconsistent interpretation, inadequate faculty calibration or insufficient observation, AI systems will amplify and systematise these deficiencies across the entire trainee cohort. Therefore, institutions must first establish robust foundational practices: supervisor training in assessment principles, calibration exercises using entrustment scales and quality monitoring systems.

Current AI applications already influence assessment practices in several meaningful ways (Gordon et al. 2024). Natural language processing enables the automated categorisation of narrative feedback, the identification of feedback patterns across multiple observations, the assessment of feedback quality and specificity and the extraction of key themes from qualitative comments. These capabilities help supervisors provide more specific feedback when generic language is detected and support the systematic analysis of large volumes of narrative data.

Machine learning applications support competency prediction through pattern recognition in assessment data, early identification of trainees at risk for academic difficulty, personalised learning pathway recommendations and adaptive assessment scheduling based on individual learning curves. These predictive capabilities enable proactive interventions and more efficient allocation of educational resources (Chan et al. 2018; Gordon et al. 2024).

Automated documentation analysis evaluates clinical documentation quality, assesses clinical reasoning from case presentations, identifies knowledge gaps from clinical notes and measures communication effectiveness in written work (Chan et al. 2018; Gordon et al. 2024). While these automated analysis capabilities are increasingly being deployed in high-resource settings such as Canada and the United States, their implementation in South African HPE remains largely aspirational because of infrastructure and resource constraints (Ras et al. 2023). Decision support systems for CCCs, which synthesise data and prepare summaries, flag concerning assessment patterns, benchmark performance against historical progression data and simulate potential outcomes from remediation interventions, are currently being piloted in select international programmes (Hauer et al. 2016; Warm et al. 2016). For instance, the University of Cincinnati's milestone-based dashboard system has demonstrated the feasibility of automated pattern recognition to support CCC decisions, while Canadian programmes utilising the Elentra platform have successfully integrated AI-driven analytics for EPA-based progression tracking (Oudkerk Pool et al. 2018; Ten Cate et al. 2020). In the South African context, the National WBA Steering Committee is exploring adapted versions of these technologies that can function within existing infrastructure limitations, including offline-capable mobile platforms and cost-effective data visualisation tools (Marty et al. 2023). The transition from paper-based to digital systems in South African teaching hospitals represents a necessary first step before more sophisticated AI-enabled decision support can be meaningfully implemented.

Potential future directions for AI applications in medical education assessment, currently in early experimental stages and requiring substantial further development, include several promising but challenging avenues.

Modalities such as computer vision for procedural assessment, multi-modal assessment integration and virtual reality (VR) and simulation are in the early stages of development and require enhanced training in context-specific reasoning.

Implementing AI in high-stakes assessment requires careful attention to ethical considerations and practical frameworks. Transparency and explainability require that AI systems provide understandable justifications for their recommendations, maintain transparent decision-making processes and supplement rather than replace human judgement. Users must understand the limitations and confidence levels of AI recommendations while assessment frameworks remain explicitly defined.

Bias mitigation requires diverse training data to avoid perpetuating existing biases, continuous monitoring for systematic disadvantages to specific groups, regular auditing of AI recommendations for fairness and human oversight of algorithmic decisions. Data privacy and security require robust protection of sensitive assessment information, clear consent processes for AI analysis of performance data and adherence to educational privacy regulations.

Implementation approaches should begin with low-stakes, formative applications before transitioning to summative assessments. They should also engage all stakeholders in the design and implementation process, establish clear validation protocols for comparing AI judgements with human expert consensus and develop ongoing monitoring systems to detect unintended consequences. Both the European Union *General Data Protection Regulation* (GDPR) 2016/679 and South Africa's *Protection of Personal Information Act* (POPIA) 4 of 2013 provide essential principles that should guide data management in AI-enabled assessment systems (European Union 2018; South African Government 2013).

■ Conclusion

The transformation of HPE towards competency-based approaches has made robust data systems not merely helpful but essential. As programmes move away from time-based proxies for competence towards direct evidence of professional capability, the quality of assessment data increasingly determines the effectiveness of educational outcomes.

Information systems have become indispensable for effective WBA in medical specialist training, transforming how we collect, analyse and utilise assessment data. The evolution from paper-based documentation to sophisticated digital platforms represents not merely a change in the medium but a fundamental transformation in how assessment functions within HPE.

The investment required for quality assessment data systems must be understood in the broader context of patient safety and health care quality. Every progression decision represents a judgement about readiness for independent practice, with direct implications for future patient care. When training programmes lack systematic evidence of trainee competence, they risk advancing individuals who are not yet ready for autonomous practice or unnecessarily delaying the progression of competent trainees.

Technology serves best as an enabler of sound educational practices rather than as a substitute for them. The most sophisticated learning management system cannot compensate for poorly designed assessment processes or inadequate faculty development. However, when properly implemented, information systems reduce administrative burden, enhance assessment quality, support valid decision-making and optimise the educational impact of assessment activities.

As we look to the future, the integration of AI and other emerging technologies promises to enhance the power of assessment information systems further. However, the human elements – thoughtful observation, meaningful feedback conversations and collaborative reflection on performance – remain at the heart of WBA. Information systems should serve to strengthen these interactions rather than replace them.

By investing in well-designed information systems for WBA, institutions not only improve the quality and efficiency of their assessment practices but also demonstrate their commitment to evidence-based trainee development and, ultimately, to high-quality patient care.

Practice points

- Robust systems are essential for competency-based medical education.
- Go digital: prioritise mobile-friendly, point-of-care platforms.
- Build in data quality checks and enable multisource feedback.
- Use dashboards and visual tools to track progress and support decisions.
- Train faculty for quality feedback, calibration and system adoption.
- Plan for AI, scalability and continuous system improvement.

■ Declarations

■ Ethical considerations

This chapter did not require ethical clearance or consent as it synthesises existing literature and does not present primary research.

■ Authors' contributions

Waseela Khan: Conceptualisation, Data curation, Methodology, Visualisation, Writing – original draft, Writing – review & editing.

Sa'ad Lahri: Writing – original draft, Writing –review & editing.

Both authors reviewed the chapter, contributed to the discussion of results, approved the final version for submission and publication and take responsibility for the integrity of its findings.

■ Artificial intelligence-assisted content generation

This book includes cartoons, figures and visual elements that were created with the assistance of artificial intelligence tools, including ChatGPT and Canva. Sumaiya Adam directed the generation process and reviewed all outputs to ensure accuracy, relevance and alignment with the content of the book.

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■ Competing interests

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■ Disclaimer

The views expressed in this chapter are the authors' own and not an official position of the institution, funder or the publisher.

■ Appendix 1

■ Practical implementation tips for data flow processes: Stage-by-stage guidance

□ Stage 1: Data generation

- Start with 2–3 core entrustable professional activities (EPAs) (validated from Canadian experience)
- Use ‘observation moments’ approach during natural clinical activities
- Include multiple observer types with brief training modules

□ Stage 2: Data capturing

- Mobile-first platforms with offline capability
- Three-minute completion time target (evidence-based)
- QR codes and automated reminders for efficiency

□ Stage 3: Entrustable professional activities collation

- Standardised EPA descriptions with visual cards
- Context tagging for case complexity and setting
- Regular data hygiene and validation checks

□ Stage 4: Benchmark analysis

- Establish local benchmarks, not just international standards
- Implement trend analysis for individual progression
- Focus on pattern quality over quantity

□ Stage 5: Dashboard design

- Traffic light systems for quick status identification
- Pre-meeting screening for committee efficiency
- Comparative analysis against cohort benchmarks

□ Stage 6: Committee decisions

- Structured meeting processes with time limits
- Regular calibration training for committee members
- Documented decision rationale for consistency

□ **Stage 7: Outcomes and actions**

- Specific, actionable feedback beyond generic statements
- Graduated response systems with early intervention triggers
- Clear communication with face-to-face meetings for major decisions

□ **Stage 8: Feedback loop**

- Monitor completion rates and system performance
- Adapt based on implementation evidence
- Scale systematically with phased expansion

■ **Cross-cutting implementation tips**

□ **Technology infrastructure**

- Plan for offline capability and data security
- Budget for ongoing technical support
- Leverage existing institutional platforms

□ **Change management**

- Heavy investment in faculty development
- Local champions in each department
- Celebrate early successes

□ **Resource optimisation**

- Share costs across programmes
- Consider technology partnerships
- Use cost-effective platforms such as Google Workspace

These tips are evidence-based (drawing from Canadian, South African and United States implementations), actionable (specific steps institutions can take) and scalable (applicable across resource levels). They provide the practical guidance needed to actually implement these systems successfully, which aligns perfectly with the writing retreat goals of creating valuable, useable content for the field.

Making collective decisions: Clinical competency committees

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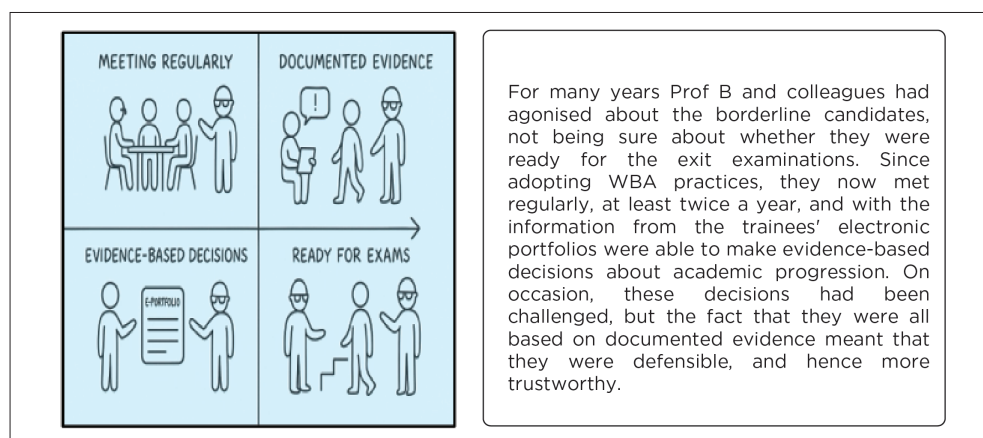
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■ Abstract

This chapter continues from the previous chapters and explains the place of clinical competency committees (CCCs) in workplace-based assessment (WBA). Imagine a steady flow of evidence of learning from the clinical workplace within a trainee-supervisor interaction captured in a portfolio, which is then assessed by a CCC. Clinical competency committees play a pivotal role in competency-based medical education (CBME) by synthesising multiple sources of assessment data to make high-stakes decisions about trainee progression. The chapter explores the structure, function and decision-making processes of CCCs, emphasising their collective responsibility in ensuring fair, transparent and defensible judgements of trainee competence. Framed within an Ubuntu praxis of interconnectedness and collaboration, it explores group decision-making, consensus-building, mitigation of cognitive biases and strategies to enhance the trustworthiness of CCC decisions, such as the use of structured frameworks and narrative assessment data. It provides guidance to medical educators on optimising CCC functioning to support both trainee development and patient safety. Clinical competency committees are positioned as critical mechanisms for translating individual assessments into meaningful, programme-level judgements that uphold the integrity of medical training. Drawing from evidence-based best practices and regulatory frameworks, the chapter highlights how group dynamics, faculty development and entrustment decisions intersect within CCC deliberations. Ultimately, this chapter serves as a guide for academic leaders, programme directors and committee members seeking to strengthen competency-based assessment and ensure the accountability and fairness of trainee progression decisions.



Source: Figure created by Sumaiya Adam (2026).
Key: WBA, workplace-based assessment.

FIGURE 8.1: Prof B and colleagues make evidence-based decisions.

■ Introduction

Clinical competency committees (CCCs) are decision-making entities that evaluate trainees' workplace-based performance against speciality-specific time periods (milestones). Literature on the introduction of CCCs first appeared in 2013 in the United States of America, where CCCs were introduced as part of the Accreditation Council for Graduate Medical Education's competency-based framework (Andolsek et al. 2015). Subsequently, many countries and clinical disciplines have embarked on developing CCCs as part of their workplace-based assessment (WBA) programmes, particularly the United States, Canada and the Netherlands and particularly in Paediatrics, General Surgery, Internal Medicine and Emergency Medicine (Ekpenyong et al. 2024). Literature on WBA and entrustable professional activities (EPAs) from Africa is beginning to appear (Fatusin et al. 2024). South Africa also formally embarked on WBA and is currently establishing CCCs in various university clinical departments and nationally in various colleges of the Colleges of Medicine of South Africa (CMSA), for example, in Family Medicine and in Chemical Pathology (Jenkins et al. 2025; Punchoo & Pillay 2025).

■ Roles of clinical competency committee

The primary role of the CCC is to make credible, summative decisions, based on evidence in the workplace, on granting or withholding trainee progression through the training programme and whether to award increased autonomy (less supervision) during patient care (Englander et al. 2024). High-stakes summative decisions can: (1) recognise attainment of a milestone within a period (phase) of clinical training; (2) provide permission to proceed to the next phase of training; or (3) provide entrustment decisions regarding whether the trainee can perform an EPA with decreased supervision. The clinical competency committee needs to agree on the number of data points needed for an EPA to be signed off (saturation) and reach an agreement on the variety of data points needed per EPA (triangulation). Various learning events (data points) in the electronic portfolio of learning (ePoL) should aggregate to EPAs that the trainee intentionally selected, according to the learning plan, for a period. It is important that every institutional training programme and its national college reach consensus on the EPAs for their discipline, how these EPAs will be assessed in the workplace (the WBA tools to be used in the ePoL) and how the CCCs will function (Kinnear, Warm & Hauer 2018). The primary purpose of the CCC is accountability and fairness to the trainee as well as to the public (Frenk et al. 2010).

Secondary roles of CCCs include the need to formulate remediation interventions and tailored training opportunities for trainees who require

additional support, evaluate programme effectiveness and identify weaknesses in the curriculum or programme of assessment and provide feedback to those overseeing the assessment programme on the focus and quality of WBAs (Englander et al. 2024).

■ Structure of clinical competency committee

A local CCC should consist of at least three faculty members directly involved in the training programme, including the training programme coordinator, with at least some of the members being familiar with the trainees (Ekpenyong, Padmore & Hauer 2021). A clinical competency committee should be diverse in terms of academic rank, gender, race, programme role, professional focus and professional background (Hauer et al. 2016). Often, the head of the department is a CCC member. With more training programmes offering an extended programme on a distributed platform in the periphery, the CCC must also include district representatives. Other members may include interprofessional colleagues who work with trainees, such as nurses (Regan et al. 2018) or allied health colleagues (Starr-Mar'ee et al. 2018) or even a member of the public (to represent patients' perspectives) (Loo, Lee & Acosta 2017). The clinical competency committee constitution will differ from discipline to discipline and university to university. The size and distribution of training programmes will influence the number of CCC members and whether a clinical discipline decides to have local (university programme) CCCs or a national (discipline) CCC or both. Small disciplines may have far fewer CCC members, while larger training programmes will have proportionally more CCC members. National CCCs should have representation from all university programmes of a speciality.

■ Processes of clinical competency committee

The clinical competency committee should meet at least twice a year. Meeting dates need to be embedded in the programmatic assessment calendar and ideally be synchronised with the university and national examination dates, to fall a month prior to examinations. This will give the CCC time to evaluate trainees' progress and provide feedback to the trainees and supervisors, identify trainees requiring additional support and make recommendations regarding trainees' progression and entrustability with patient care tasks (Duitsman et al. 2019). Trainees and supervisors need to know when the portfolios will be summatively assessed, to ensure they are up to date with portfolio entries and to optimise the CCC decision-making process. Depending on the number of trainees and CCC members, the ePoLs

are equally distributed among the CCC members (to different people who are not the trainee's direct supervisor) to individually assess them before the CCC meeting. Some universities may decide to have two examiners for every ePoL, especially during the transition time, when not every assessor feels confident to assess without bias.

The clinical competency committee member is given access to the trainee portfolio by the programme administrator and the trainee, respecting the privacy of the trainee, while scrutinising the multiple aggregated low-stakes ad hoc formative assessments, from diverse perspectives, of workplace-based clinical performance in the portfolio. The clinical competency committee member completes a short report, or CCC form or template (Table 8.1, Table 8.2, Table 8.3, Table 8.4 and Table 8.5), with the various data points (such as observations, entrustment-based discussions, logbooks, teaching events, multi-source feedback (MSF), reflections, assignments, supervisor feedback, learning plans and end-of-allocation reports) aggregated to EPAs, with aggregated entrustment levels for each EPA. During the subsequent CCC meeting, every CCC

TABLE 8.1: Trainee information template for clinical competency committee assessments.

Item	Response
Name of trainee	
Year of training being assessed	
Interim or final assessment	
Training complex	
Facility where trainee is based	
Which EPAs were selected in the learning plans?	
Timeliness of evidence submitted (throughout the year or only at the end)	

Source: Table created by Sumaiya Adam (2026).

Key: EPAs, entrustable professional activities.

TABLE 8.2: Portfolio evidence template for clinical competency committee assessments.

Evidence type	Number submitted
Learning plans	
Allocation reflections	
Allocation assessments	
Observation procedures	
Observation consultations	
Observation teaching	
Entrustment-based discussions	
Educational meetings	
Logbooks	
Multi-source feedback (MSF)	
Written assignments	
Other	
Total number of data points in the dashboard	

Source: Table created by Sumaiya Adam (2026).

Key: EPAs, entrustable professional activities.

TABLE 8.3: Clinical competency committee evaluation template for trainee assessments.

CCC assessment criteria	Comments
Quality of trainee reflections (What, Why, system thinking, What if...)	
Number of assessors (e.g. > 5)	
Amount and quality of narrative feedback (scanty, average, sufficient)	
Collateral information from CCC member at the committee	
Feedback to the trainee	
Feedback to the university programme	

Source: Table created by Sumaiya Adam (2026).
Key: CCC, clinical competency committee.

Review the trainee ePoL dashboard. Are there a sufficient number and variety of data points to allow for an overall entrustment level 4 for each EPA per year for signing the trainee off on a specific EPA? At least one data point should be a Supervision End-of-Allocation Assessment for that EPA. Trainee reflections, supervisor feedback and MSF entries must also be considered. Also consider other evidence from the workplace, for example, patient safety incidents, outcomes of mortality and morbidity meetings, patient complaints and compliments.

TABLE 8.4: Entrustable professional activity review template for clinical competency committee trainee assessments.

No.	EPA title	Number of data points	Spread of entrustment level decisions for the EPA's data points	Overall entrustment level considering all data points, or note 'insufficient evidence' to sign off on this EPA
1	Managing children requiring inpatient care and procedures			
2	Managing adult and adolescent patients with chronic conditions			
3	Managing patients with infectious diseases			
4	Managing patients with emergency conditions			
5	Managing adults and children with palliative care needs			
6	Managing care for older patients			
7	Leading a clinical team			
8	Leading clinical governance activities			

Source: Table created by Sumaiya Adam (2026).
Key: EPAs, entrustable professional activities.

TABLE 8.5: Summative decision template for clinical competency committee assessments.

Summative decision	Response
Portfolio acceptable to proceed to next phase in training or the national exit exams	Yes / No

Source: Table created by Sumaiya Adam (2026).

member presents the portfolio(s) they evaluated in 5–10 minutes per trainee. Thereafter, a structured and efficient (5–10 minute) discussion follows, by the whole CCC to make a high-stakes summative decision on trainee progress to the next training phase or year or eligibility to take the national exit examination. After the CCC meeting, the chair of the meeting gives structured feedback to every trainee and to the supervisors in the training programme.

In short, the CCC decision-making processes should be consistent, transparent and in the spirit of Ubuntu, so that even adverse decisions are conveyed in a manner that acknowledges the inherent value of every individual, even if they may not have reached the desired technical proficiency. Key steps include *preparation* (review of portfolios and data by CCC members ahead of meetings), *presentation* (summary of each trainee's performance), *deliberation* (structured discussion), *decision-making* (consensus or majority vote on progression, entrustment, or remediation) and *documentation* (formal recording of decisions and justification, with feedback to the trainee and the training programme).

■ Benchmarking and collective decision-making

The clinical competency committee has a responsibility to follow a principle-based, structured process of decision-making that supports its fair and trustworthy functioning. Two models around CCC collective decision-making include problem identification or a developmental approach (Rowland et al. 2023). The developmental approach is favoured, with recommendations that the CCC evaluates all trainees and not just the trainees requiring additional support (Jenkins et al. 2025). It is important to understand the shift away from 'scoring' or 'averaging' entrustability decisions. The trainee portfolio evaluation does not only look at the 'ten best data points of evidence, etc.', but reviews the total 'picture' of the trainee.

The evaluation process can begin with a thorough review of the portfolios of the final-year trainees to determine their competency to proceed to the national exit examinations. Thereafter, evaluations can proceed to include all other trainees, down to the first-year level. While this inclusive approach is important, particular attention should still be paid to trainees requiring additional support – those who are not demonstrating sufficient evidence of the expected level of competence for their stage of training. All portfolio 'datapoints' are taken into consideration. There is also evidence of performance outside the portfolio that is considered by the CCC, especially feedback from the CCC member who knows the trainee from working with the trainee, and service information such as patient safety incidents,

outcomes of morbidity and mortality meetings and patient compliments and complaints. Assessment templates (such as the example in Table 8.1) are useful to ensure consistency and trustworthiness in the assessment process. Regular conversations within the CCC allow for shared mental models around decision-making processes to slowly emerge, for example, deciding collectively on the usefulness of various assessment data. Some sources of evidence (data points) are 'weighted' more heavily than others; for example, end-of-allocation or rotation supervisor feedback reports may give more valid evidence than logbooks. Another key data point would be evidence of clinical governance, for example, a quality improvement project. Table 8.6 explains some of the pitfalls, misconceptions and mitigating strategies for CCCs.

TABLE 8.6: Clinical competency committee pitfalls, misconceptions or limitations and mitigating strategies.

Potential CCC pitfalls, misconceptions or limitations	Potential mitigating strategies
Pitfall: ignoring potential sources of bias in the CCC process	Ensure diversity of the CCC members (e.g. on issues of identity, speciality, phase of training, non-physician members). Ensure diversity in a compulsory annual MSF data point in the portfolio. Supervisor and trainee development on the evidence that suggests a trainee merits entrustment and/or advancement. Structured procedures for reviewing and interpreting trainee performance information and generating decisions. Explicit and common recognition of what is subjective in assessment and how it might arise at the level of the data point, ad hoc entrustment decision and/or CCC are key to mitigate and prevent bias in decision-making. Avoid having each member prepare for one trainee, precluding group deliberations. A standard approach to data presentation.
Pitfall: inadequate engagement of trainees in the process	Standardised process for engaging trainees, transparent to both CCC members and trainees. A priori clarity around what trainee data is to be used by the CCC in decision-making, including data on trustworthiness. The standard process for trainee self-assessments on the EPAs requires them to attest to their self-perceived readiness for entrustment. Trainees can also create the CCC form in the electronic portfolio of learning. Involvement of trainees and their allotted supervisor in a portion of the CCC meeting to present their self-assessment. The standard process for post-CCC meeting feedback (written and oral) to the trainee, including CCC findings and decisions and any plans for follow-up.
Misconception: 'One size fits all'. Clinical competency committees will need to vary depending on the type of trainees they are assessing (e.g. where on the education-training-practice continuum the trainee is), the volume of trainees and of EPAs	Adjust meeting frequency to ensure the ability to discuss each trainee's progress on the EPAs (i.e. ensure time allotted matches the workload). Adjust size of CCCs to ensure the engagement of all members. Adjust the number of CCCs to accommodate increased trainee volume. For example, a programme with four trainees per year might have a single CCC, while a programme of 120 trainees might require several CCCs. May need to have an ad hoc CCC meeting to cater for trainees wanting to sit the national exit exams, especially if these are not aligned with the CCC timelines.

Table 8.6 continues on the next page→

TABLE 8.6 (cont.): Clinical competency committee pitfalls, misconceptions or limitations and mitigating strategies.

Potential CCC pitfalls, misconceptions or limitations	Potential mitigating strategies
Misconception: the CCC is only for struggling trainees	Ensure discussion of all trainees at the same intervals and allow sufficient time to provide feedback on EPA-based decisions and progress to each trainee. (Note: This does not mean that a CCC must review every trainee at every meeting.)
Limitation: CCCs are time-consuming	Optimise administrative support, such as pre-meeting aggregation of data, intra-meeting note-taking and post-meeting provision of written feedback. Develop a reward system for participation of trainers (such as counting towards promotion and tenure or Continuing Professional Development points). Create term limits for committee membership, when possible, to share the time commitment across faculty.
Limitation: CCCs may be both an entrustment body and a promotion body simultaneously	Ensure roles are clear a priori regarding the decision-making expectations for entrustment on EPAs and for advancement across phases of training. Identify potential conflicts of interest a priori and determine standard processes for conflict resolution. Ensure sufficient supervisor narrative feedback in the trainees' portfolios to support entrustment ratings, especially if the ratings are high (e.g. rating of 4 or 5).

Source: Sumaiya Adam's own work adapted from Englander et al. (2024).
Key: CCC, clinical competency committee; EPA, entrustable professional activity; MSF, multi-source feedback.

■ Synthesising data for summative assessments

Synthesis involves more than averaging entrustment scores or summarising all narrative comments. Because the attainment of competence is a nonlinear developmental process, the trainee's trajectory over time is more important than an average rating, and longitudinal review of performance is essential. The evaluation of the trainee portfolio is vulnerable to bias, as human judgement is involved in interpreting and synthesising data. Therefore, high-stakes decision-making in health professions education (HPE) and training is best done by a group such as a CCC, where various assessors can provide varying perspectives on the longitudinal view of the trainee's learning trajectory, ensuring defensible decisions and mitigating bias (Englander et al. 2024). Group decision-making within a CCC is important because, in general, groups make better decisions than individuals acting alone (Hauer et al. 2016). It is important for the CCC to hear the voices of every member while guarding against the risks of groupthink.

■ Trustworthiness in subjectivity

There is a legitimate concern about the risk of assessment subjectivity. It is now widely recognised that all forms of assessment are subject to subjectivity, even while striving for increased objectivity or trustworthiness. The literature suggests that 'subjective expert judgements by medical professionals should be embraced as the core of assessment of medical

trainees' (Ten Cate & Regehr 2019). While psychometrics play an important role in trainee assessment fairness, there is a recognition that objectivity is not necessarily guaranteed, with a move towards a post-psychometric era in HPE (Hodges 2013). While entrustment rating errors are frequent in individual observations, aggregating multiple observations for trainee assessment increases validity and 'high-stakes decisions regarding supervision levels for patient care can be made with input from just three faculty members observing 10 cases' (Dine et al. 2024, p. 32). Consequently, for the portfolio to reflect the most authentic picture of trainee learning and development, it must include a variety of low-stakes ad hoc formative assessment decisions from observations, consultations, products, reflections and feedback from various supervisors in different contexts and with different levels of clinical complexity.

Having a programmatic assessment approach, ensuring that CCC members are trained in assessment theory and practice and ensuring good feedback to trainees has been shown to contribute to the trustworthiness of assessments (Bok et al. 2013). In South Africa, a national training programme exists to train supervisors in WBA, which includes how a CCC works. A clinical competency committee examines the breadth (numbers and variations) and depth (of trainee reflections and supervisors' feedback) of the subjective assessments from the clinical workplace over a time period and makes a coherent, collective (rather than 'objective') judgement (Hauer et al. 2016).

■ Making a final decision

Trainees need to select a proportion of the EPAs for the training programme for a specific training period. They must also keep in mind that if they are planning to write the national College exit exams after 36 months (which is acceptable in South Africa), their portfolio needs to reflect sufficient evidence of entrustment in all and/or most EPAs. For example, in a four-year programme with 28 EPAs, the trainee needs to select nine EPAs for every training year during the first three years. Data points documented in the portfolio represent various learning events that took place over a period (training year) and were entered by the trainees in their portfolios, as evidence for the selected EPAs. The clinical competency committee's decisions are supported by a standard application of an assessment template, allowing a norm- and criterion-referenced approach, giving credibility and fairness to the assessment process (Table 8.1, Table 8.2, Table 8.3, Table 8.4 and Table 8.5).

The clinical competency committee reaches a collective decision whether the trainee is competent to proceed to the next stage of training, working with decreasing levels of supervision, or needs more supervised training before being signed off for the EPAs that the trainee selected, or needs remediation. Together with data that support trainee performance

of EPAs, the CCC also triangulates data from the workplace and the portfolio that reveal trainee trustworthiness, specifically the ability of knowing one's limits and seek help.

Five components of trustworthiness include: (1) Agency (proactive towards work, team, safety, personal development); (2) Reliability (conscientious, predictable, accountable, responsible); (3) Integrity (truthful, benevolent, patient-centred); (4) Capability (specific knowledge, skills, experience, situational awareness); and (5) Humility (recognises limits, asks for help, receptive to feedback). Together, these factors allow for an agency, reliability, integrity, capability and humility (A-RICH) entrustment decision (Ten Cate & Chen 2020).

Typically, training programmes would expect trainees to reach entrustability level 4 or 5 for all EPAs by the end of training. The levels are level 1 'trainee observes only', level 2 'direct supervision with supervisor in the room', level 3a 'supervisor available on site', level 3b 'supervisor available off site', level 4 'independent practice' and level 5 'able to train others'. A digital dashboard should summarise all data points aggregated to the various EPAs, together with all supervisors' narrative feedback and trainees' reflections, to give an overview of trainee development for a period. This reduces cognitive workload on the CCC and allows for time efficiency. Table 8.7 gives an overview of the flow of data in WBA.

TABLE 8.7: Flow of data-driven decisions of a clinical competency committee.

Component	Details and actions
Data points	Learning events for EPAs are selected by trainees and entered in portfolios. Low-stakes, formative, ad hoc assessments over the course of the training period.
Triangulation	Fairness and entrustability ensured by multiple assessments, multiple types (Mini-CEX, DOPS, CBD, MSF, products), multiple assessors, multiple contexts, across time (regularity). Trainee reflections and response to supervisors' feedback documented.
Saturation	Sufficient data points to demonstrate consistent competence. Check consistency of data points entered for the EPAs selected by the trainee for a time period (evaluate against expected milestones).
Aggregation	CCC reviews a dashboard of aggregated data per EPA, against predetermined entrustability levels for each EPA.
Committee deliberation	CCC makes a summative entrustment decision for the selected EPAs: Competent to proceed to next stage of training, or to national exit exams? Able to work with decreasing supervision? Needs further supervised training? Needs remediation?
Decision recording	CCC documents decisions with rationale. Record level of entrustment per EPA. Update trainee records and inform supervisors: competent to proceed or insufficient evidence to sign off.
Feedback to trainee and programme	CCC chairperson provides clear, structured feedback. Agree on actions, additional support if needed or progression plans.

Source: Table created by Sumaiya Adam (2026).

Key: EPA, entrustable professional activity; Mini-CEX, mini-clinical evaluation exercise; DOPS, direct observation professional skills; CBD, case-based decision; MSF, multi-source feedback; CCC, clinical competency committee.

■ Governance

An important outcome of a CCC meeting includes giving actionable feedback to trainees, supervisors and the training programme director. This could include identifying the trainee requiring additional support who needs more supervision or remediation in the next learning plan, the need for faculty development, helping supervisors give better feedback and identifying curricular gaps or inconsistencies (Redfern 2006). It is important that trainees know upfront what the requirements of the WBA and portfolio completion are and how the CCC will assess their portfolios. Furthermore, it must be clear in the university rule book how trainees have recourse to appeal if they feel that the CCC assessment process was not fair. University departments need to incorporate the terms, references and rules of CCCs in their programmatic assessment processes.

To increase the trustworthiness of decisions taken and fairness to the trainees, the CCC can also include an external faculty member from a different programme, who should give a feedback report to the CCC from observations during the CCC meetings. It is important to create consistency and continuity within a clinical speciality between local (university) CCCs and national (discipline) CCC processes. Finally, as CCCs become established and recognised for their role in making high-stakes summative decisions, it must be clear what the strength of their contribution to assessment decisions is.

■ Conclusion

Clinical competency committees represent a keystone of competency-based medical education (CBME). When effectively structured and resourced, they support fair, defensible and developmental decisions about trainee competence. Faculty development, institutional alignment and continuous improvement are essential to realising the full potential of CCCs in transforming postgraduate medical education. See Appendix 1 for a brief guide to CCCs.

Practice points

- Clinical competency committees consist of a core group of experienced faculty members who understand WBA.
- Clinical competency committees meet at least twice a year to evaluate the portfolios of all trainees.
- They need sufficient data aggregated to EPAs and triangulated from various sources.
- Faculty training of CCC members is important to ensure consistency and fairness.
- A structured CCC evaluation template allows for consistency and fairness.

- Each clinical competency committee member prepares their report of a select few trainees' portfolios.
- These are then presented in a few minutes during the CCC meeting.
- After a structured deliberation, a high-level decision regarding trainee progression is made.
- The clinical competency committee documents their decisions and gives feedback to trainees and the training programme.
- Governance and inclusion in university rules are essential to defend CCC decisions.

■ Declarations

■ Ethical considerations

This chapter did not require ethical clearance or consent as it synthesises existing literature and does not present primary research.

■ Authors' contributions

Louis Jenkins: Conceptualisation, Data curation, Methodology, Project administration, Resources, Supervision, Validation, Writing – original draft, Writing – review & editing.

Mulimisi Ramavhuya: Data curation, Methodology, Validation, Writing – review & editing.

Richard Cooke: Validation, Writing – review & editing.

All authors reviewed the chapter, contributed to the discussion of results, approved the final version for submission and publication and take responsibility for the integrity of its findings.

■ Artificial intelligence-assisted content generation

This book includes cartoons, figures and visual elements that were created with the assistance of artificial intelligence tools, including ChatGPT and Canva. Sumaiya Adam directed the generation process and reviewed all outputs to ensure accuracy, relevance and alignment with the content of the book.

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■ **Disclaimer**

The views expressed in this chapter are the authors' own and not an official position of the institution, funder or the publisher.

■ Appendix 1

■ Making collective decisions: Clinical competency committees

□ How to establish and run a clinical competency committee meeting

□ *Establishing a clinical competency committee*

- Members must have experience in clinical practice and work-based assessment (WBA) methods (e.g. the head of department, programme director, senior trainer, consultants). They should know their trainees. One member will know the summary decisions for their programme's candidates. National CCCs need representation from all universities.
- Faculty training of members on WBA processes is important to ensure CCC members and supervisors understand their roles, are aware of their biases and agree on WBA processes.
- Ensure university rules incorporate the CCC terms and references, and that faculty and trainees are aware of assessment expectations. Align local CCCs with the national CCC.

□ *Conducting a clinical competency committee meeting*

- Set a minimum of two dates a year to meet. Synchronise these with other programmatic assessment dates and the national exit exam dates, to allow sufficient time before final exams. Trainees need to submit their portfolios a reasonable time before the CCC meeting.
- All trainees should be reviewed, with more time spent on those in difficulty, in a developmental, rather than a problem-finding, approach.
- Share the portfolios among the CCC members before the CCC meeting and ensure different members evaluate trainees who are not directly under their own supervision. Ideally, they should be e-PoLs.
- Use an agreed-upon structured template to assess each portfolio. The template used by all local CCCs and the national CCC ensures fairness and a coherent, collective process.
- A digital dashboard in the portfolio allows for a quick overview of various data points triangulated from different sources and aggregated in sufficient numbers (saturation) to various EPAs that the trainee selected for a time period.
- Have a structured format for the CCC meeting, with a few minutes of presenting the portfolio assessment by the member who reviewed and summarised the portfolio beforehand (according to the template), followed by a short discussion, with input from the CCC member who knows the registrar, including reviewing evidence such as the A-RICH

trustworthiness acronym and a final decision by the CCC regarding progression or remediation.

Making decisions

- Agree on the number and type of data points per EPA needed to allow level 4 entrustability. For example, an end-of-allocation supervisor feedback report carries more credibility than a logbook entry.
- Entrustable professional activities with sufficient evidence of entrustment level 4 or 5 at a training milestone can be signed off, while EPAs with insufficient evidence will need a recommendation for further training or remediation.
- Emphasise confidentiality in the CCC, respect and fairness towards CCC members and the trainees, while expecting high standards of WBA processes.
- The clinical competency committee takes the various training contexts in the country, with its challenges, into account.
- The chairperson of the local CCC gives a feedback report to the local university programme, or the national CCC gives feedback to the College of Medicine of SA on the CCC decisions and gives feedback to the various programmes where there are uncertainties regarding incomplete evidence of training experience. Trainees must understand their access to an appeal process.
- The clinical competency committee may allow for a period of accepting clarification if more evidence is presented to the CCC within a short period (typically 1–2 weeks).

When learning is compromised

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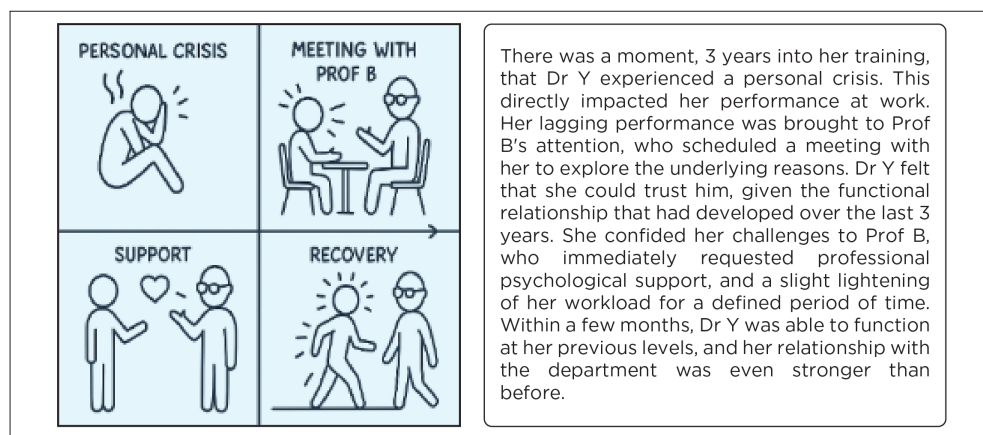
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■ Abstract

This chapter explores the multifaceted challenges faced by trainees and supervisors in medical education when learning is compromised. It examines how difficulties manifest in behaviour, emotional responses and professional relationships, often rooted in complex personal, contextual and systemic factors. The chapter highlights the vulnerability of both patients and trainees within the supervisor-trainee-patient triad and the consequences of impaired learning on patient safety and academic progression. It underscores the importance of early detection, empathetic leadership and emotionally competent remediation strategies.

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Source: Figure created by Sumaiya Adam (2026).

FIGURE 9.1: Dr Y overcomes difficulties with support from Professor B.

The chapter also addresses the need for faculty development, including in emotional regulation and relational competence, and outlines approaches to support both trainees and supervisors in difficulty. Within an Ubuntu framing, the chapter advocates for a culture of psychological safety, accountability and respectful relationships to foster effective learning and teaching in clinical environments.

■ Introduction

A proportion of individuals associated with a medical training programme will encounter difficulties, experience a drop in expected performance and will require support and other measures to counter the impact and consequences of these challenges. Medical training programmes have consistently encountered poorly performing trainees and supervisors, who might be unsafe and present a risk to patients' and other stakeholders' safety (Yepes-Rios et al. 2016).

Educational principles underpinning the value of workplace-based training and assessment emphasise the strength of the supervisor-trainee dyad, sometimes supervisor-led, sometimes trainee-led, that operates to build, assess and rely on two-way trust to perform units of professional practice. The workplace-based context of this dyad adds authenticity and, therefore, credibility to any assessment outcomes. However, any negative stressors experienced through workplace-based assessment (WBA) add complexity to the presentation of a supervisor or trainee in difficulty, in the context of either or both of service and learning (Erumeda, George & Jenkins 2022).

In health professions education, an approach from an Ubuntu perspective foregrounds the inherent relationality between all humans, in this instance, the trainee–patient–supervisor triad that functions within a specific context (Mokhachane et al. 2024; Ras 2023). Consequently, educational challenges that arise may lie with the trainee, the supervisor, their relationship, contextual issues beyond their control or any combination of these four (Figure 9.2).

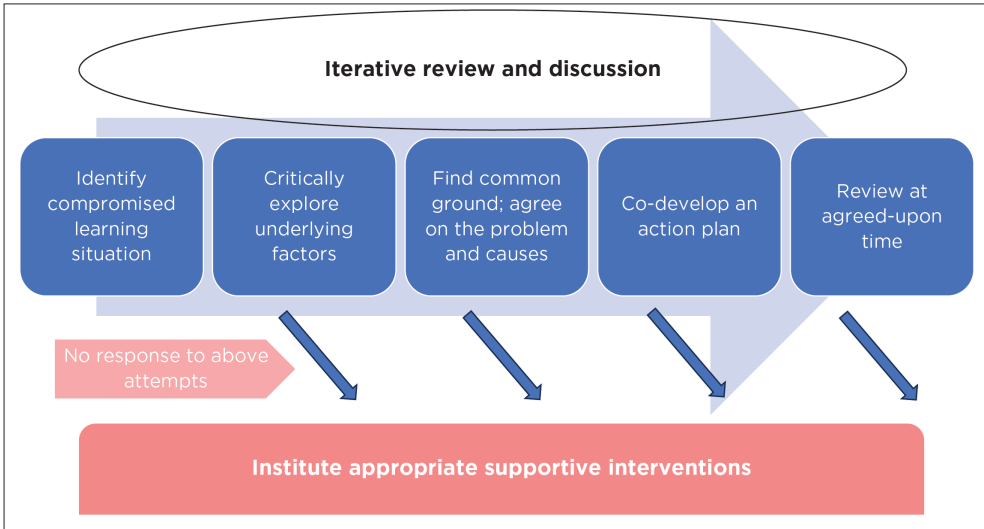
This chapter begins from the most relatable and practical reference point, that of how the struggling trainee most commonly presents in practice, before we describe how a struggling supervisor may present. Even though learning problems may be commonly experienced, this does not mean they are easily recognisable or obviously understood; the chapter considers why such manifestations present, as often symptomatic of an underlying problem or difficulty. Ways to prevent, or at least promptly identify, struggles of colleagues (trainee and supervisor) are discussed, as well as how and to what degree to respond in a constructive, solutions-oriented approach. The chapter concludes with what future needs and gaps to consider.

A structured approach to difficulties in WBA and learning is proposed in Figure 9.3, which separates the behaviour of the individual from contextual factors that may influence behaviour, followed by collaborative ways of developing solutions. The entire remedial process is underwritten by accountability, and a clear pathway to referral to institutional disciplinary mechanisms is emphasised, should there be minimal response or engagement.



Source: Figure created by Sumaiya Adam (2026).

FIGURE 9.2: Trainee, supervisor, relationship and context.



Source: Figure created by Richard Cooke and Sumaiya Adam (2026).

FIGURE 9.3: Approach to compromised learning in medical specialist training.

■ Colleague in difficulty

Medical specialist programmes are often victims of chronic, slow-burning structural imbalances and competing stakeholder demands; this ‘python crisis’, as conceptualised by Wang (2025), exerts a continuously constricting pressure on training programmes, severely impacting the well-being and performance of both trainees and their supervisors. These competing demands typically arise from a systemic friction between the operational priorities of clinical service leadership, the educational mandates of universities and the rigorous standards enforced by external accreditation bodies.

■ Trainee

A struggling trainee can present in many ways, which are often similar across different contexts (Samuel, Bernstein & Hodaie 2022; Sandhu et al. 2023). This may be in the form of behavioural dysfunction that impacts services, or as emotional or cognitive issues that impact patients or their own safety. Examples include absenteeism, or the ‘disappearing act’, in which a trainee is often late, not contactable or is on regular sick leave. Equally, ‘presenteeism’ can manifest as a trainee who is physically present but disengages either intentionally or not and demonstrates a low work rate or poor performance on other metrics of capability. Such behavioural dysfunction may manifest in one or both of poor academic and service-related performance. Furthermore, abnormal emotional responses to

service or learning encounters are well-recognised as typical of a struggling trainee (Christensen et al. 2016). Anger and disrespect directed at any of the many stakeholders are very disruptive and traumatising for the targeted individual. Belittling, bullying and other forms of abuse are also examples of how the difficulties and vulnerabilities of a trainee may manifest. These behavioural issues may be because of underlying mental health disorders that require attention. It is also important to recognise trainees with different support needs, such as those with a learning disability or neurodiversity, who may struggle without additional support.

■ Supervisor

There are behaviours in the workplace that can flag a supervisor as having challenges. Firstly, some behaviours affect the supervisor's ability to provide clinical care, including absenteeism, habitual poor punctuality or other unprofessional behaviours, substandard clinical knowledge (usually because of not staying up to date) and unwillingness to ask for help or to admit mistakes (Olasoji 2018). A red flag is evidence of the 'bypass syndrome', when junior members of the team will avoid asking their supervisor for assistance or advice.

'Toxic' behaviours in the teaching environment include belittling and/or humiliating the trainee in a ward round or at the bedside, or 'pimping' phenomena – where the supervisor poses difficult to impossible questions to trainees with the objective to teach, but maintaining a dominant hierarchy (Crowe, Clarke & Brugha 2017). Some supervisors may show difficulty working within the team, with a rude or abrasive manner to other team members or when discussing referrals with colleagues from other departments.

'Vanishing feedback' describes supervisors' reluctance to give corrective feedback for fear of upsetting trainees, leading to vague or absent guidance of any value (Ende 1983). This avoidance has since expanded into failure to fail, where underperformance is neither clearly documented nor acted upon for various reasons related to low motivation, depriving learners of essential feedback for improvement (Yepes-Rios et al. 2016).

In many cases, there is usually poor insight into how their behaviour is impacting the team, with blame laid elsewhere and an unwillingness to engage in improvement or development activities in teaching.

■ Factors contributing to compromised learning

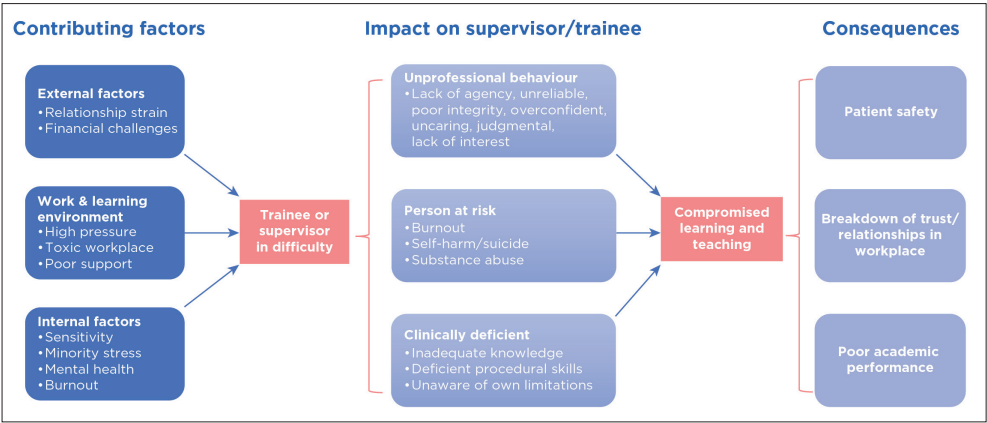
Many complex and interrelated factors may contribute to why a trainee or supervisor may be experienced as challenging or having high support

needs, and it is not always easy to pinpoint these. An attempt to render this complex space more understandable is presented in Figure 9.4, by separating observable phenomena into contributing factors, impact on the individual and possible consequences.

External factors, often not visible to those at work, may contribute significantly to strain on the trainee or supervisor. This could include relationship stressors with friends or family, such as going through a divorce, facing financial issues or loss.

The workplace and academic context in which the trainee-supervisor finds themselves may be part of the problem. Doctors work in high-pressure, emotionally laden environments and are at higher risk of burnout, depression and anxiety (Dubale et al. 2019). Strained relationships at work, whether with a manager or colleagues, may add further frustration and unhappiness, and a toxic work environment can have a significant impact on a trainee’s ability to learn and on a supervisor’s ability to teach effectively (Olasoji 2018).

We also must consider internal factors and not expect all clinicians to have the same level of resilience to manage the challenges at home and work. Some doctors are more vulnerable to stress or have challenges with depression, anxiety or burnout. The hierarchical structures in hospitals and academia, with accompanying power dynamics and unconscious bias, are still commonplace and create further risk (Crowe et al. 2017; Mrara et al. 2025). A trainee who has experienced discrimination or may be subject to minority stress because of race, gender, sexual orientation, gender identity or religion may struggle to navigate complex power dynamics with a supervisor from a different demographic, who carries considerable power



Source: Figure created by Richard Cooke and Sumaiya Adam (2026).

FIGURE 9.4: Compromised learning and teaching: Contributing factors, impact on supervisor-trainee and consequences.

in the workplace and may be unaware of their own bias. Colleagues who are neurodivergent may struggle with the neurotypical-normative patterns of social reciprocity and find it difficult to be in sensory environments that are unfriendly to their inherent sensitivities. They are often misunderstood, with no allowances made for their specific needs.

Different frameworks exist that capture the multitude of factors contributing to poor performance, such as the SKIPE model (skills, knowledge, internal, past and external factors) that builds on the relationship-diagnostics-management-professionalism model as a relational framework (Norfolk & Siriwardena 2013). The trainee, supervisor and their working context can be considered interdependent components of a complex system.

■ How stress impacts behaviour

Chapter 3 introduced the impact of stress on behaviour. Emotion plays a powerful role in learning and training, and negative emotions impact the trainee's ability to engage in an educational programme (Alshareef, Fletcher & Giga 2024; Toufan, Omid & Haghani 2023) and in a supervisor's ability to train, supervise and assess effectively (Brennan 2022; Crowe & Brugha 2018; Lusk 2023). The various contributing factors may hugely impact the strain a clinician is experiencing, which triggers stress, which, in turn, precipitates emotions such as fear, rage or distress to encourage protective survival behaviours. These behaviours are mostly unconscious, often irrational and usually counterproductive in managing complex interpersonal relationships (Figure 9.4).

This can include avoidant behaviours such as not showing up for work, always being late and not engaging actively with the clinical team (fear-dominant emotions). It may contribute to trainees not asking for advice or admitting to mistakes (Brennan 2022; El Tarhouny, Hassouna & Mansour 2025). An anxious supervisor who may be fearful of conflict may not be able or willing to give feedback when picking up gaps in clinical knowledge or skills.

Rage-dominant emotions (irritability, frustration, anger and indignation) may be present in a trainee who is rude to colleagues or even patients, overly critical of others or undermining seniors in the department and contribute to a deprecating or toxic work environment. The trainee may blame others for their challenges and consider attempts at remediation as disrespectful and invasive. Similarly, a supervisor who engages in the workplace from a place of anger through belittling, bullying and intolerance can be hugely damaging to the workplace learning environment (Crowe et al. 2017; Olasoji 2018).

Finally, distress and/or grief-dominant emotions (such as shame, depression, dejection or hopelessness) may be triggered with a breakdown of trust in a relationship, through isolation, rejection or feelings of inadequacy and failure. If a trainee is dealing with unmanageable feelings of distress, it can lead to an experience of overwhelm and not coping, with a negative impact on performance and learning (Alshareef et al. 2024; Toufan et al. 2023). There is concern that the high expectations in medical education and the tendency to suppress the validity of emotion in the workplace contribute to increased levels of burnout and depression (Crowe & Brugha 2018; Mills 2022). It is important to recognise the contribution of stress and ineffective regulation of emotion to the behaviours witnessed in the workplace.

■ Prevention and early detection of difficulties

A workplace culture should reward the early help-seeking behaviour of a struggling colleague. Transformational and empathetic leadership styles both encompass the role-modelling and influence to motivate team members to be proactive in recognising, seeking and receiving the help they need. An advantage of a carefully implemented WBA process is the early recognition of the trainee in difficulty (Christensen et al. 2016). The earlier a trainee in difficulty is recognised, the more likely the success of any remediation. It is essential to identify trainees who may be struggling with depression and burnout early and provide the appropriate support and assistance.

Academic and non-academic staff training should incorporate early recognition and responses to these complexities, and well-defined processes should be in place to proactively flag and act on them. A sub-optimal response by the trainee to constructive feedback (from the supervisor) on how to improve is a reliable means of recognising the struggling trainee, who might lack one or more of the agency, reliability, integrity, capability and humility (A-RICH) components. Similarly, when trainees complain about supervisors who are seemingly unwilling (or unable) to teach, the response should be earlier rather than later. Objective measures of supervisor performance would indicate whether the trainee reports are accurate, and regular check-in sessions would be needed to ensure corrective actions are negotiated and implemented. One of the most difficult situations for a programme director to manage is when trainees complain about supervisors, but no objective performance indicators exist that validate these claims. A well-designed WBA programme makes these indicators explicit to all.

The effectiveness of WBAs alone in identifying underperforming trainees is limited, suggesting that direct supervisor observations and the

supervisor-trainee relationship are equally important (Baboolal & Singaram 2023). While multiple WBA tools allow a triangulation of data points to discern reduced academic and professional performance in more depth, defining 'underperformance' can be inconsistent and lacks clear indicators, complicating the identification process (Sadeq et al. 2025). Where an underperforming trainee is identified by the clinical competency committee (CCC) as someone in difficulty, a clearly defined and individualised remediation plan, along with a monitoring mechanism, should be developed and implemented. Where underperformance persists despite optimised interventions, the institution has a responsibility to include the employing health authorities in further deliberations, and where an impairment process is required, the Health Professions Council of South Africa also needs to be informed.

■ Consequences of impaired learning in workplace

The most vulnerable actors in the trainee-patient-supervisor triad are the patient and trainee. As such, they are vulnerable to experiencing the consequences of impaired learning: the patient as a direct consequence of inadequate or unsafe care, and the trainee in terms of poor academic progression and professional reputation.

The impact of a supervisor-in-difficulty on patient safety must not be underestimated. Doctors always work within teams and will elicit assistance from colleagues and supervisors as the occasion arises. A supervisor who is unapproachable, for whatever reason, increases the risk of medical error (Lusk 2023; Olasoji 2018). Similarly, trainees are less likely to ask and may not admit to mistakes for fear of being belittled or humiliated (Crowe et al. 2017). Unsupportive behaviour also leads to higher stress and resulting burnout, depression and anxiety in trainees (Crowe & Brugha 2018). Therefore, a disruption caused by a struggling trainee or supervisor has ramifications for their relationship and the broader system components that are interdependent, most critically, a possible impact on the quality of patient care.

Compromised learning impacts academic performance. In the context of WBA, the trainee may receive frequent low ad hoc entrustability ratings for WBAs, for example, absenteeism can be assessed as poor reliability, in the context of the A-RICH framework (Ten Cate & Chen 2020) or rude behaviour as a challenge of one of the relational qualities (compassion and/or openness and curiosity) (see Chapter 3). Multi-source feedback (MSF), by requesting anonymous feedback from different team members, can assist the CCC in formulating an assessment of such professional qualities. Multi-source feedback is recognised for assessing and providing

feedback on CanMeds roles, especially communicator, professional and collaborator (Lockyer & Sargeant 2022). In the context of this chapter, MSF may therefore serve as a mechanism to identify trainees struggling with non-cognitive, relational competencies critical to these roles.

An important consideration is how perceived poor performance by a colleague could lead to negative judgement by peers, faculty and other colleagues. Judgement is both a consequence and a cause of further impairment; shame in medical education is problematic and does not promote learning (Lusk 2023). Given that poor performance is defined primarily by what we observe, underlying factors should be explored before any pronouncement is made regarding the quality of performance. How these evaluations are communicated is important, as the words we use have power within our professional relationships. Because of the complexity of interdependent factors associated with behaviour, there is difficulty describing and explaining behaviour. Care must be taken not to label the individual as problematic, by way of a pejorative adjective or phrase, as the behaviour and not the individual should be the target. Views and descriptions should focus on the lack of professional behaviour, not personal judgement. Judgement is firstly of the conduct, not the character of the colleague.

■ How to assist a colleague in difficulty?

Once a trainee or supervisor in difficulty has been identified early, the next challenge is how to address these issues. While remediation should focus on the behaviour and not the person, the reality is that often the focus in remediation is on behaviour only, without addressing the underlying emotions or helping supervisors and trainees develop emotional competence. If trainees and supervisors do not learn emotional awareness and appropriate regulation strategies, one may find that remediation efforts have little or no effect. Emotional regulation strategies are increasingly relevant, including in fields such as nursing (Du et al. 2026) and medical curricula review (Neufeld 2025). Trainees and supervisors can regulate emotions using adaptive, antecedent-focused emotional regulation strategies such as cognitive reappraisal, rather than expressive suppression of emotions. It is impossible to address undesirable emotions in the supervisor or trainee without first creating a social space where they feel safe to engage with their own vulnerabilities.

When considering remediation or redress for a trainee or supervisor who is underperforming, it is important to consider the linkages between emotion and behaviour. Without considering how to assist the supervisor-trainee in managing emotions, it will not be possible to address the issues at hand. By fostering the necessary safety and emotional competence to

approach the challenges at hand from a place of calm (executive mode), one can foster the care and curiosity needed to build professional and relational qualities (see also Chapter 3).

■ Trainee in difficulty

Remediation interventions are described as ‘the act or process of correcting a deficiency’ (Cleland et al. 2010, p. e185), are commonplace to assist trainees experiencing difficulties. A 2019 systematic review identified as many as 109 types of interventions for learners experiencing academic difficulties (Lacasse et al. 2019) using a reliable taxonomy of behaviour change techniques (Michie et al. 2015) innovatively applied to medical education programmes.

The challenge is that attempts at remediation, if not managed sensitively, increase levels of anxiety and further avoidance. The trainee in the remediation meeting may agree to all the feedback given and promise to ‘do better’, but when under clinical pressure in the workplace, may give way to the same dysfunctional behaviours as before. Academic remediation must include a process that can assist the supervisor or trainee in identifying the stressors that trigger the affected emotion and to learn strategies for managing this emotion in the workplace. The confidentiality of both this process and outcomes should be at the individual’s discretion, particularly if professional boundaries are to be respected; however, the decision to undergo remediation should be shared with their supervisor or line manager.

Actions can include faculty training, designed to meet both supervisor and trainee needs. The evidence on how effective WBA is in identifying and remediating postgraduate trainees experiencing academic difficulties is inconclusive (Barrett et al. 2016), but suggests that multisource assessments may be more useful than other WBA tools (Donnon et al. 2014).

Notwithstanding the importance of a trainee-centred approach, the rationale for disciplinary action in the face of risks to patient safety is well supported. The serious consequences of disciplinary measures for the trainee are equally stark; trainees can lose their place in an academic programme and face disciplinary sanctions from the university, professional and regulatory bodies.

The processes of identifying, verifying, unpacking and remediating poor performance of a trainee must be credible and transparent for disciplinary processes to be accepted. Personal insight of the trainee into their level of performance, relative to that expected, is a key requisite to remediation. A common precursor to disciplinary action is the confirmation that this insight is missing, so further remediation will be unsuccessful.

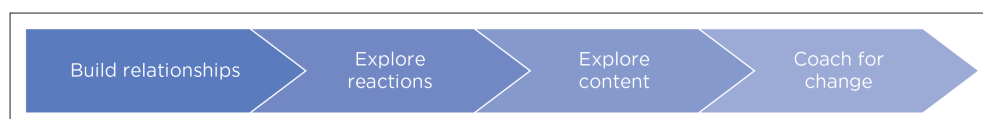
Such remediation is often attempted, but the lack of trainee insight into the weaknesses and/or the need to improve is confirmed.

■ Supervisor in difficulty

The approach to the supervisor in difficulty differs from that of the trainee who is struggling. Usually, the behaviours of a clinical supervisor fall under the remit of performance management and are the responsibility of the Clinical Head of Department. It is essential to create a safe space to explore the factors that may be contributing to the supervisor's stress and behaviour. The reflective performance feedback (R2C2) model, described graphically in Figure 9.5, can be useful when having a conversation about poor performance (Sargeant et al. 2015). The *relationship* is built first to ensure the supervisor feels safe and respected, after which the views and *reactions* of the supervisor to the event and/or feedback are explored. The *content* of the performance issue is then explored to better understand the supervisor's point of view of the supervisor. Lastly, *coaching* of the supervisor includes co-developing an action plan to remediate and correct the behaviour (see Appendix 1).

In the context of South African academic health services, supervisors are often jointly employed by the health authorities and the university. In this regard, it is important that employment contracts clearly stipulate the requirement to provide clinical supervision and training. It therefore becomes a joint responsibility of the two employers to ensure that the necessary induction, training and support are in place to ensure that the supervisor fulfils their academic responsibilities.

How to introduce a discussion on professional and relational qualities in the workplace can be a challenge. These conversations are necessarily confidential, as the rights and dignity of the concerned supervisor must always be protected. The dialogic nature of the engagement must be emphasised, giving the supervisor sufficient time and space to voice their own perspectives and opinions. A multi-source feedback tool could be useful, eliciting anonymous feedback on the supervisor's behaviour from various colleagues. It may be a useful exercise to gather such data on all supervisors on a regular basis, making these data available to the manager



Source: Figure created by Richard Cooke and Sumaiya Adam (2026).

FIGURE 9.5: Reflective performance feedback: A model that builds relationships, explores reactions and content, and coaches for performance change (R2C2).

whenever needed. Where the workplace has well-established standards like performance agreements, behavioural norms or codes of conduct in place, the findings of the MSF and reflections of the supervisor can be weighed against these standards. An agreement on the problem is an important next step, and the manager may need to elicit the support of human resource consultants to mediate this conversation. Mitigating factors within the workplace must also be taken into consideration. The next step is to co-develop an action plan to find a way forward. An agreement is then reached on the implementation of this plan, how it will be monitored and when a structured review will take place. This entire process, which would likely take place over several meetings, may very well be an emotional experience for the supervisor, and the manager should always consider assistance with emotional regulation and management.

Not all supervisors have the same level of emotional competence, with the factors that contribute to emotional regulation strategies still poorly understood (Gross 2024). One's ability to manage emotions in each situation is impacted by a multitude of factors. Emotional regulation is an important part of managing stress and behaviour. If supervisors do not learn how to understand and regulate emotions, they will be unable to engage in the positive behaviours required, especially in high-pressure work environments where learning and training are happening.

The question of when to escalate to disciplinary measures must be guided by the safety principles of the patient and the trainee. If the supervisor is not amenable to remediation and patients or trainees are unsafe, the disciplinary process as dictated by the institution must be followed. The supervisor must be accountable for their actions when persons are put at risk. Where a supervisor is jointly employed by the university and health authority, the respective human resource departments should collaborate to develop a unified pathway in which to manage poor performance or disciplinary action related to refractory behaviour. Referral of an impaired or incapacitated colleague to the clinical regulatory authorities, such as the Health Professionals Council of South Africa, should be done in a fair, consistent and transparent manner.

■ Training of supervisors

Supervisor perceptions of being under-prepared to meet WBA expectations are common in South Africa (Ras et al. 2023). The training of trainees is a key performance activity for clinical supervisors, and yet most supervisors have never received formal training on mentoring and teaching. There have been calls for faculty development in mentoring and training (El Tarhouny et al. 2025; Toh et al. 2022), particularly around the behavioural and social competencies important to teaching. Supervisors are also not taught how to

manage difficult or negative emotions in trainees and may tend to minimise or suppress trainee experiences (Zhou et al. 2021). As highlighted in Chapter 3, there is a need for a specialised set of skills in supervisors to be included in medical education (Mash et al. 2019). Ideally, any supervisor who supervises trainees should have completed an accredited training course and have annual performance reviews. In 2025, the College of Medicine of South Africa (CMSA) and the South African Council of Medical Deans (SACOMD) launched a short course for clinical supervisors on WBA (SWAT – Supervisor Workplace Assessment and Teaching) to capacitate clinical supervisors across 10 universities in South Africa (<https://cmsalearn.co.za/>). The course emphasises that knowing oneself, the trainee and the learning environment are foundational to good clinical supervision, in which early identification of the supervisor and trainee in difficulty is a key objective.

■ Supervisor–trainee relationship in difficulty

It is possible that the supervisor and trainee, as individuals, are competent and safe, but when they interact in the workplace, the educational potential of their encounter is compromised. As discussed in Chapters 3 and 6, learning is optimised when the professional relationship is founded on respect, trust and a shared purpose (Jonker et al. 2024). When these elements are missing, learning may be compromised, and the relationship may slide into dysfunctionality.

When viewed through the lens of respect, trust and common purpose, the supervisor–trainee dyad can be examined. However, this examination would require honest and candid communication, which may be best moderated by an independent party, particularly where trust has been eroded. Where this honest communication cannot be envisioned, one must consider whether forcing them to work together is possible or counterproductive. Working within a suboptimal relationship would require either or both to exhibit higher levels of tolerance than would usually be required within a healthy professional relationship.

■ Conclusion

In addressing compromised learning within medical education, it is essential to recognise the complex interplay between individual, relational and contextual factors. Early identification, empathetic engagement and emotionally competent remediation are key to safeguarding both patient care and professional learning and development. A culture of psychological safety and accountability must underpin all interventions. Ultimately, fostering respectful, trusting relationships between trainees and supervisors is foundational to effective learning and teaching. Continued investment in supervisor training and systemic support will be critical to future progress.

Practice points

- Consider whether it is the trainee or the supervisor in difficulty, or a compromised learning and training environment.
- Consider internal and external factors in the remediation process.
- Stress with rage- or grief-dominant emotions may play a significant role.
- The training programme should detect the trainee or supervisor in difficulty early on.
- Patient safety and trainee safety should be paramount in the remediation process.
- Use the R2C2 model to have a remediation meeting, which includes:
 - Building rapport and relationships (create emotional safety & explore context)
 - Exploring reactions to and perceptions of the data/report (active listening)
 - Exploring clinicians' understanding of the content of the data/report (internal and external factors, observed behaviours in the workplace)
 - Coaching for performance change (provide feedback).
- Address underlying factors, e.g. refer to a mental health practitioner if depressed.
- Address external and internal factors if the issue is ability, e.g. if there are challenges in the working conditions or emotional regulation/communication skills workshops.

■ Declarations**■ Ethical considerations**

This chapter did not require ethical clearance or consent as it synthesises existing literature and does not present primary research.

■ Authors' contributions

Richard Cooke: Conceptualisation, Writing – original draft, Writing – review & editing.

Madeleine Muller: Conceptualisation, Writing – original draft, Writing – review & editing.

Both authors reviewed the chapter, contributed to the discussion of results, approved the final version for submission and publication and take responsibility for the integrity of its findings.

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■ Disclaimer

The views expressed in this chapter are the authors' own and not an official position of the institution, funder or the publisher.

■ Appendix 1

■ How to have a remediation meeting

Use the R2C2 model to structure your meeting: Build **R**elationships, Explore **R**eactions and **C**ontent and **C**oach for Change (Sargeant et al. 2015)

□ Build rapport and relationships

Build a relationship and create emotional safety by addressing two threats to safety:

- Establish your respect for the person (you are safe now).
- Reassure them regarding the purpose of meeting – remediation and/or non-disciplinary (you will be safe).

Aim for an attitude of calm, warmth, curiosity – explore their specific context.

□ Explore reactions to and perceptions of the data and/or report

Explore their views and/or reactions to what has happened. Use active listening.

□ Explore clinicians' understanding of the content of the data and/or report

Explore the content of the issue together:

- What's behind it (internal and external factors)?
 - Is it a motivation issue? How important is it for you to change this behaviour?
 - Is it an ability issue? How confident are you that you can change this behaviour?
- What does it look like (observed behaviours in the workplace)?
- What are the consequences (to the person and/or the work environment)?

□ Coach for performance change

Provide FEEDBACK – what is going well and what is not going well

If the issue is *motivation*, address underlying factors, e.g. refer to a mental health practitioner if depressed.

If the issue is the *ability*:

- Address external factors: make an action plan to address those (e.g. if there are specific challenges in the working conditions).

- Address internal factors (e.g. emotional regulation and/or communication skills workshop): coaching to improve the gap.

Have a clear follow-up plan with actionable deadlines.

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Mobilising South African educational stakeholders to implement workplace-based assessment at scale

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■ Abstract

Implementing workplace-based assessment (WBA) in a complex ecosystem that has been established for over a hundred years is a daunting task. Despite this, there have been considerable successes enjoyed within the South African context since 2022.

Reflecting on these successes, this chapter traces the steps taken by the collective working group for the period 2022–2025. Following a brief introduction to the South African training platform and its key stakeholders, we describe the work completed to date, demonstrating how this was aligned with the strategic objectives. We outline the essential governance structures needed for a project such as this and provide some insight into strategic stakeholder engagement. The chapter concludes by identifying areas for future research and action.

‘The journey of a thousand miles begins with one step’

Lao Tzu

■ Introduction

Medical specialist training is embedded in the South African higher education landscape. In fact, the medical school at the oldest university in South Africa (SA), the University of Cape Town, was one of the first faculties established in 1902. Medical education has evolved since those days from what was initially an apprentice-type model to the contemporary competency-based approach that frames workplace-based assessment (WBA). In the South African context, this training is deeply woven into the public health system of delivery. The dynamic interaction of the education system with the health care system is reflective of the global discourse on the best ways for education systems to respond to the needs of patients and the communities from which they come (Frenk et al. 2010). The shift towards this realist framing that centres an enhanced patient experience, highlighting safety within a real-world context, means that a substantive transformation is taking place on many levels: (1) conceptually, as new frameworks are drafted; (2) operationally, as these frameworks are implemented; and (3) educationally, as the outcomes have shifted from demonstrating competence to earning trust as an emerging specialist.

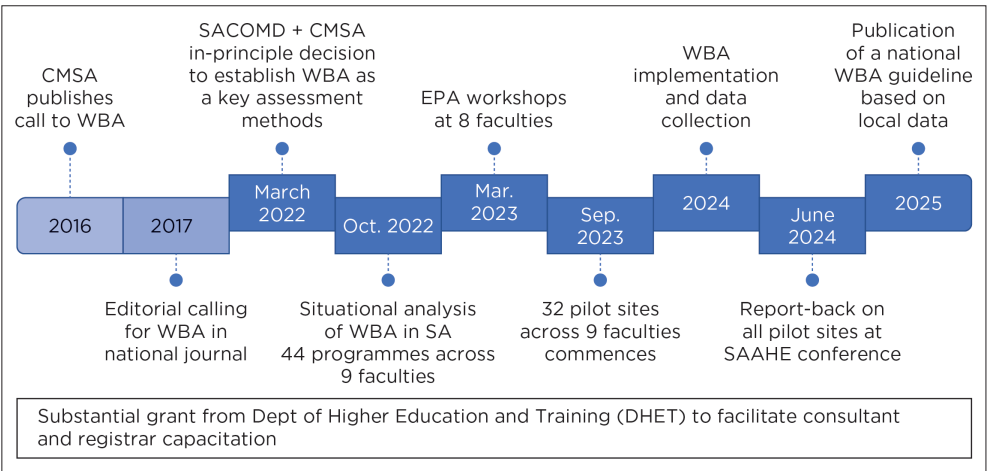
This chapter describes how a WBA programme was conceived and implemented at scale in a low- and middle-income setting, highlighting the deep perspective shifts required throughout the process. Although SA is perceived as a middle-income country, the reality of being the most socio-economically unequal society in the world means that

resources are not distributed equally across various training platforms. This presents one of the persistent challenges we face in the pursuit of scaling localised gains in implementing these changes across diverse training platforms.

The socio-economic and geographic diversity of platforms, with its implications of variable access to resources, intersects with cultural and linguistic diversity in a country that has 12 official languages and is home to numerous ethnic groups. Although English is the preferred language of higher education, the broad-scale implementation of a conceptually homogeneous educational system in this heterogeneous context presents complexity that would be nearly impossible to overcome if it were coming from one perspective. Our attempts have been infused with the involvement of colleagues from a variety of training platforms from the very beginning, bringing critical voices to the table when making decisions that have a broad impact.

■ Journey thus far

As workplace-based assessment gained traction in the global body of health professions educational (HPE) literature, it did not go unnoticed by educators and researchers in SA. The convergence of interests between parallel educational groups was therefore not a coincidence, but rather a careful nurturing of convergent ideas: training institutions represented by the South African Committee of Medical Deans (SACOMD); the legislated unitary examining authority represented by the Colleges of Medicine of



Source: Figure created by Sumaiya Adam (2026).

Key: CMSA, Colleges of Medicine of South Africa; WBA, workplace-based assessment; SACOMD, South African Committee of Medical Deans; EPA, entrustable professional activities; SAAHE, South African Association of Health Educationists.

FIGURE 10.1: The timeline to implementation of workplace-based assessment in South Africa.

South Africa (CMSA); officials from the National Department of Health; the Health Professions Council of SA (HPCSA); the National Health Laboratory Services (NHLS); and an educational research group, which originated from the South African Association of Health Educationists (SAAHE), funded by the Department of Higher Education and Training (DHET). Multi-stakeholder national conversations had started as early as 2017, as indicated in Figure 10.1 (Sathekge 2017). A timeline of developments from 2016 to date is presented in Figure 10.1. Each of these groups had stated interest in WBA aligned to their respective roles. The research group was intent on exploring the local context and appetite for implementing WBA, the CMSA wanted to incorporate WBA in assessment practices, and the SACOMD's interest lay in finding ways to integrate it into their everyday teaching and learning activities.

The South African Committee of Medical Deans is a voluntary association of those faculties in universities which deliver medical education at both specialist and undergraduate levels. At the time of writing (2025), there were 10 such faculties teaching at an undergraduate level, with nine providing specialist training. The deans in this collective support each other in matters of mutual concern and drive collaborative projects within education and with regard to relationships with partners such as accreditation bodies, professional associations and the government who provide access to clinical training platforms.

The Colleges of Medicine of South Africa is responsible for the assessment of all medical and dental specialities as the accredited unitary examination. These assessments occur during the training period and at the end of training in high-stakes capstone examinations. There are 30 Councils within the CMSA which govern the learning and expectations for individual disciplines.

The Department of Higher Education and Training is the government department charged with post-secondary school education. The department manages the funding by the government of the higher education system in which specialist medical education is located. The Department of Higher Education and Training manages additional funding through conditional grants such as the University Capacity Development Grant.

The converging interests were catalysed by the coronavirus disease 2019 crisis in 2020–2021, which forced changes to in-person activities, the introduction of remote online assessments and brought into question the role of WBA in these high-stakes, legally mandated, summative assessments.

In early 2022, when the leadership of these three groups (SACOMD, CMSA and the research group) realised their common interests, the CMSA

and the SACOMD constituted a joint national working committee that was mandated to coordinate their respective activities across the country. This national steering committee identified four workstreams early in the process:

- Workstream 1 would explore the factors that would influence the operationalisation of WBA in the South African context. This workstream came to be known as OpWorx.
- Workstream 2 was tasked with building capacity among faculty across the country in reformulating their training curricula to reflect entrustable professional activities (EPAs).
- Workstream 3 was given the responsibility to explore the technical specifications of an information system that would progressively and in real-time collect data on the workplace activities of trainees and compile this into a comprehensive electronic portfolio of learning (ePoL), considering the local contextual issues.
- Workstream 4 examined the existing regulatory environment at each institution and made recommendations for amendments that would incorporate WBA into the institutional rules.

The work generated by these workstreams, and co-ordinated by the steering committee, pursued and achieved the following broad objectives in 2023–2024:

- A rapid mixed methods situational analysis of WBA practices and perceptions across the country was conducted (Ras et al. 2023, 2024). This set the baseline for the interventions that followed. The analysis included trainees' and supervisors' perceptions of WBA and their training contexts and identified areas of intervention, predominantly in faculty development. Some of the contextual issues that arose included heavy clinical workloads, which left little time for teaching and learning, inadequacy of some clinical spaces for clinical training and inequitable distribution of training opportunities between various institutions. The supervisor–trainee relationship emerged as a central factor that could either facilitate or hinder effective WBA implementation.
- In 2024–2025, in response to the growing national demand for faculty development, a certified short course was developed that introduced supervisors to the basic concepts of WBA and provided guidance on how to implement it in their local contexts. This course offers an online component hosted by the CMSA (learn@CMSA) and a two-day in-person component delivered by trained facilitators at each institution. By the middle of 2025, a total of 28 facilitators were spread across institutions, and more than 200 supervisors had undergone the training.

- The entrustable professional activities workstream conducted a series of workshops for discipline-specific leaders within the CMSA and guided them in developing EPA frameworks that aligned with their local realities and needs. By mid-2025, more than a third of all disciplines in the country had developed EPA frameworks.
- There was considerable effort applied to distilling the technical specifications needed for an effective ePoL, and multiple iterations of key specifications were workshoped over 18 months from mid-2023 until the end of 2024. By the end of 2024, these had been organised into a framework that informed a request for interest from information technology companies in SA. At the same time, DHET was approached for an additional tranche of funding that would secure the development of the technology. By mid-2025, the funds had been procured, and the possible service providers had been narrowed down.
- The steering committee had the foresight to work towards establishing a national consortium that would act as a single purchaser of any products required for the national implementation strategy. As such, by the time the service level agreement with the technology company would be ready to be signed, this consortium would be the single purchasing entity with a mandate to transact on behalf of all the key stakeholders.
- A survey to map the regulatory landscape for WBA across all institutions was instituted. Once completed, this would describe the state of regulations related to WBA and identify rules for amendment or implementation to ensure WBA practices align with national and local requirements.

■ Procuring resources

To facilitate the work of conceptualising and implementing WBA in the local context, significant financial resources were required. This came in the form of a University Capacity Development Programme grant, a visionary initiative of the DHET (Department of Higher Education and Training 2017). The University Capacity Development Programme initiative has the intention of ‘Transforming teaching, learning, researching and leading towards enhanced quality, success and equity in universities’. Funded directly from the national fiscus, it provides grants to universities for projects that improve the success rates in under- and postgraduate educational programmes. Figure 10.2 captures quotes from the grant document that illustrate the core elements of the successful application.

Alignment with funder's objectives:

The aims of WBA dovetail easily with those of the UCDP, in that registrars, consultants and educationalists collaborate actively to co-create curriculum and pedagogy that are directly relevant to our context.

Alignment with international norms:

There have been some significant international shifts in the education of medical specialists over the past number of years, increasing utilisation of WBA.

Clear aims and objectives, with associated activities, costing and timelines:

Goal: This project aims to make WBA a credible process that contributes to registrar success in a range of South African settings.

Objectives

1. To identify existing WBA initiatives in South Africa.
2. To understand the factors that have facilitated and hindered the implementation of those initiatives.
3. To explore the conceptions and misconceptions of consultants and registrars from participating universities about key constructs (competency, milestones, entrustable professional activities and inter-rater, programmatic assessment).
4. To capacitate consultants and registrars to implement WBA effectively and adaptively in their settings.
5. Develop a guideline that provides a framework for designing, planning and implementing WBA practices in the South African context.

Activities (2022-2025)

1. Build collaborative partnerships between higher education institutions, CMSA and SAAHE in developing a comprehensive project plan to explore WBA experiences and practices in South Africa.
2. Conduct case studies of existing practices (Goal #1), situational analysis of the WBA practices within the collaborating institutions, as they apply to registrar training.
3. Conduct interviews with registrars and consultants from participating departments.
4. Organise and present workshops on WBA components and implementation with consultants and registrars.
5. Develop a locally relevant framework for designing, planning and implementing WBA practices synthesised from the evidence generated in activities 2-4 and international best practice, that is sensitive to how local conditions (setting, discipline) impact implementation and require adaptation of tools and practices (Goal #4).

Source: Figure created by Sumaiya Adam (2026).

Key: WBA, workplace-based assessment; UCDP, University Capacity Development Programme; CMSA, Colleges of Medicine of South Africa; SAAHE, South African Association of Health Educationists.

FIGURE 10.2: Key elements of the successful grant application.

■ Getting everyone on board

The broad alliance aforementioned had representation from every university in SA that was training medical specialists in 2023, and in 2024, the newly established Nelson Mandela University was also included. Additionally, the DHET-funded research group, which adopted the tasks and was identified as Workstream one, also had representation from every faculty in SA.

There was an intentional commitment towards optimising this inclusivity. In compiling the research group, strong efforts were made to ensure that each training institution was represented. As this was a new grouping, the project lead used national networks strategically to seek out and invite members to the working group to optimise a diversity of perspectives. This group met monthly in an online format, providing each institution with the opportunity to express their experiences, achievements and reservations.

This open-handed approach to collaboration resulted in the outputs of this group being broadly representative of the spectrum of participants.

Conversely, the CMSA and SACOMD are by design representative structures enshrined in SA regulations. It helped that the leadership of both these structures had strong working relationships and found ways to collaborate seamlessly.

The South African Committee of Medical Deans launched a Pre-Consortium Advisory Board (PCAB) led by the Chair of SACOMD. This consortium will create an administrative structure (a legal persona with agency) within a formal legal framework to manage this unique national multi-university collaboration. A formal Advisory Board was constituted in April 2024 as the governance structure for the consortium. This Pre-Consortium Advisory Board has representation from all the universities and the CMSA and is the interim governance structure for the process of establishing the consortium. The members serving on the PCAB are deans or representatives who have been nominated by their respective deans. All universities have representation on PCAB. The statement of intent of PCAB includes:

- To represent all Faculties of Health Sciences with medical schools
- To include all members in equal representation on the Board
- To formulate a legal framework in the form of a consortium to manage all assessment-related activities
- To ensure a suitable funding model for the consortium
- To ensure that all contracting activities operate from a comparable resource base regarding costing
- To oversee and enable the activities that involve assessment practices in both undergraduate and postgraduate assessment
- To support alignment of implementation processes and outputs in the different institutions that will address the collective needs of the formal group
- To enable institutions to have a legal vehicle to negotiate, finalise and enter into agreements for the sole purpose of the establishment of this consortium.

The Pre-Consortium Advisory Board also has terms of reference and has been meeting every month. A legal company has been appointed by PCAB to oversee the establishment of a vehicle that would manage the WBA implementation process. By mutual agreement, the CMSA provided financial support to the PCAB as an interim arrangement.

■ Governance for workplace-based assessment

Governance is one of the most important pillars in implementing WBA. A number of structures were established to deal with the journey of the WBA process and implementation. One important aspect of this was to

have a legal framework in place to enable implementation. Management and leadership play equal roles in ensuring excellent sustainable implementation and success. Roodt (1995) states that leaders are necessary to provide focus and direction of intent and effort. The vision statement ensures that the strategy plan of the company and/or institution is an integrated and sustainable programme. Clear management structures are the backbone of any well-functioning organisation – they are like the blueprint that keeps everything from turning into chaos.

The governance of WBA needs a specific approach on different levels. It includes:

- *Clinical competency committees (CCCs)*: These expert panels review portfolios and WBA data to make summative decisions about trainee progression and entrustment (Jenkins et al. 2025).
- *Institutional leadership*: Medical schools and teaching hospitals should establish dedicated assessment committees or curriculum boards to oversee WBA and EPA integration.
- *National regulatory bodies*: Organisations such as the CMSA and SACOMD provide overarching policy and accreditation standards.

Faculty development is part of governance in ensuring future investment in the concepts of WBAs and entails:

- *Standardised assessment tools*: Institutions should adopt validated WBA instruments (e.g. mini-clinical evaluation exercise [mini-CEX], direct observation of professional skills [DOPS], case-based discussions) aligned with EPA frameworks.
- *Peer-review and calibration*: Regular workshops and peer evaluations help maintain consistency across assessors.
- *Training programmes for supervisors*: Faculty must be trained in observation techniques, feedback delivery and use of entrustment scales to ensure assessment literacy.

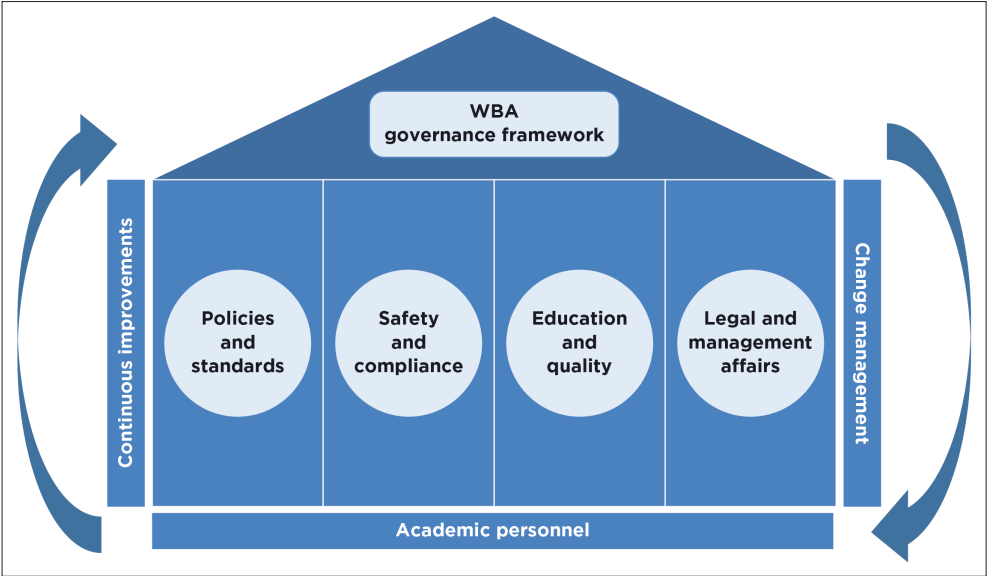
The leadership and direction provided by management as part of governance are very important. As part of the process, roles and responsibilities need to be established, with accountability being part of the monitoring process. Clear reporting lines are needed to prevent confusion and overlapping of duties, making it easier to place accountability at the correct level.

Change management is fundamental to the successful implementation of WBA processes. As part of the change process, it is important to note that academic institutions are typically resistant to change, sometimes even higher than non-academic institutions. To address this resistance to change, one needs to identify the forces and barriers involved in change; design activities to secure a process in which everybody takes ownership for; and advise people who need help (Harris et al. 2003, p. 187). Smit and Cronjé (2002, p. 224) identify the reasons for resistance to change, depicted in Figure 10.3.



Source: Figure created by Sumaiya Adam (2026).

FIGURE 10.3: Reasons for resistance to change.



Source: Figure created by Sumaiya Adam, adapted from <https://www.slideteam.net/data-governance-framework-with-continuous-improvement.html#images-1>.
Key: WBA, workplace-based assessment.

FIGURE 10.4: A data governance framework with continuous improvement.

It is important to focus on anticipated change because this will be change without resistance or with minimal resistance. Efforts and energy should be focused on implementing change, rather than reacting to resistance (Van Zyl 2004, p. 111).

Figure 10.4 provides the structure required for change management and improvement, which has been a central focus of this project.

■ Stakeholder relationships

Stakeholder engagement is one of the most important principles to successfully implement an initiative which may impact various areas of work. Engaging stakeholders is crucial for the success of any project or initiative. It is important to establish a sustainable strategy for engagement,

with identification of stakeholders with whom one has strategic alignment. Stakeholders can be defined as a person, participant, organisations or institutions that influence the behaviour of a trajectory and/or trend of an action in a specific environment. Stakeholders have interest and power and may be positive contributors, obstructors, destructors or constructors. *Contributors* are entities that improve any activity by participating constructively and add incremental value; *obstructors* make activities more difficult by creating barriers that slow progress or complicate processes; *destructors* constrain impact by actively undermining or derailing the initiative, constraining its effectiveness or damaging its intended outcomes; and *constructors* make significant contributions to the purpose and/or aim of the initiative by generating new ideas, solutions or structures that significantly strengthen its purpose and impact.

Core to stakeholder engagement is building relationships with individuals or groups who have a stake in the success of a particular project or organisation. Engaging stakeholders is essential for ensuring that their perspectives, concerns and expectations are considered when making decisions that could impact them.

The key areas will be areas of mutual interest that will be to the benefit of both parties and enable the partnership to take the individual parties to greater heights. Providing an extensive background in stakeholder engagement is important, and the areas to focus on are outlined in Table 10.1.

TABLE 10.1: Focus areas for successful stakeholder engagement.

Areas of focus	Descriptors	The South African journey example
Understanding stakeholders	Stakeholders are individuals, groups or organisations that can affect or be affected by a project, business or decision. They can include employees, customers, investors, government agencies, local communities, suppliers and more. It is important to identify all relevant stakeholders and understand their needs, interests and influence.	The governance structures approved a stakeholder matrix for use in engagement. This matrix listed the importance of both influence and importance.
Relationship building	Building and maintaining positive relationships with stakeholders are essential for successful engagement. This involves understanding their needs, addressing their concerns and demonstrating a commitment to collaboration and mutual benefit.	The relationship between the CMSA and SACOMD, for example, has been nurtured over many years. It is a relationship focused on quality specialist education.
Consultation and feedback	Actively seek input and feedback from stakeholders to understand their perspectives, concerns and expectations. Encouraging open dialogue and listening to stakeholders' feedback can help identify potential issues and opportunities for improvement.	Letters of progress were formally sent to faculties and presidents of the colleges to inform them about progress and timelines. There were also regular engagements in the formal meetings of both CMSA and SACOMD.
Managing expectations	Set clear expectations with stakeholders regarding the project scope, timeline, deliverables and outcomes. Managing expectations helps to avoid misunderstandings, conflicts and dissatisfaction among stakeholders.	The Registrar National working group representing all universities was established to engage with trainees on WBA matters. This is the first structure of its kind in South Africa.

Table 10.1 continues on the next page→

TABLE 10.1 (cont.): Focus areas for successful stakeholder engagement.

Areas of focus	Descriptors	The South African journey example
Communication	Effective communication is crucial in stakeholder engagement. Clear, transparent and timely communication helps to keep stakeholders informed, engaged and involved throughout the project lifecycle.	Updated sessions and sessions of progress were held at institutional level to provide feedback, set new achievement goals and do training on new developments in the WBA environment.
Importance of stakeholder engagement	Engaging stakeholders leads to better decision making, increased trust and credibility, improved project outcomes, risk mitigation and enhanced reputation. By involving stakeholders in the decision-making process, organisations can build stronger relationships and foster collaboration.	Institutions were represented on an individual basis in governance structure (PCAB) to improve communication, gather input and establish ownership on the correct level.
Inclusivity	Ensure that stakeholder engagement processes are inclusive and consider diverse perspectives and voices. By including a wide range of stakeholders in decision-making processes, organisations can make more informed and equitable decisions.	Regular sessions were scheduled with specific stakeholders with feedback, but open forums were also held regularly during national online road shows. Questions were addressed at this stage.
Accountability	Hold stakeholders and the organisation accountable for their commitments, actions and decisions. Clearly define roles and responsibilities, monitor progress and ensure that agreements are upheld.	Feedback sessions were held, for example, with trainees at the national level as one example. Interpersonal conversations were also held to increase personal accountability.
Conflict resolution	Conflicts and disagreements may arise during stakeholder engagement. It is important to have strategies in place for resolving conflicts in a constructive and timely manner to maintain positive relationships and keep the project on track.	Some of the potential conflict areas were dealt with by setting up confidential voting on resolutions, which may have had divergent positions.

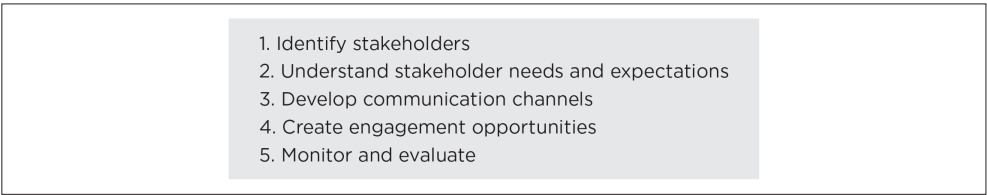
Source: Table created by Sumaiya Adam (2026).

Key: CMSA, Colleges of Medicine of South Africa; SACOMD, South African Committee of Medical Deans; WBA, workplace-based assessment; PCAB, Pre-Consortium Advisory Board.

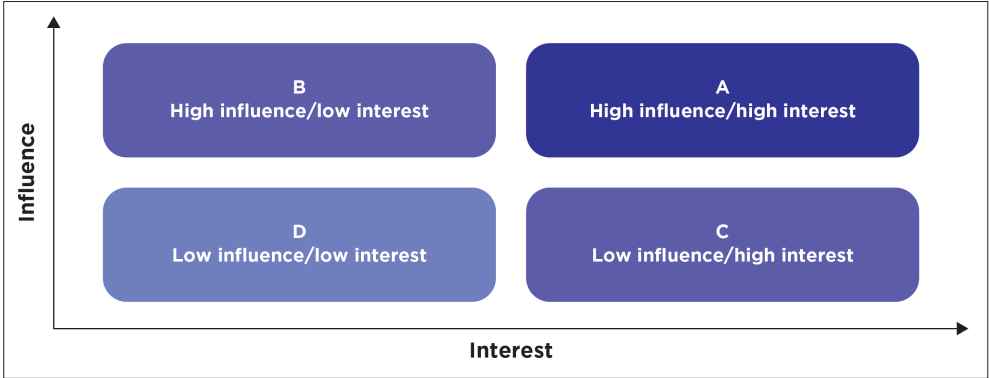
This inclusive approach ensures that the principle of equity is honoured in this diverse landscape.

In the South African context, the following stakeholders are deemed essential for successful WBA implementation: the national and provincial Departments of Health (DOH) and the NHLS as custodians of the clinical learning platform nationally and within provinces; the HPCSA as the guardians of patient safety and the regulation of the professions; the CMSA and the SACOMD as shared stewards of the competency-based framework; and funders and other stakeholders who may have regular or transient engagements with patient interests.

Actions relevant to establishing engagements with these stakeholders include developing and implementing Memoranda of Understanding, Memoranda of Agreement and Service Level Agreements, ensuring mutual agreement within a legal framework, accountability and resource commitments, as well as ensuring role clarity.



Source: Figure created by Sumaiya Adam (2026).
FIGURE 10.5: Actions that facilitate effective stakeholder engagements.



Source: Figure created by Sumaiya Adam, adapted from the Merieux Foundation (2025).
FIGURE 10.6: Making decisions about stakeholder inclusion.

Actions that are important to focus on in stakeholders’ engagements are to have a strategy and a plan for each stakeholder. The key actions are listed in Figure 10.5.

The principle for identifying stakeholders includes commitment to purposeful engagement rather than a superficial window-dressing approach. Ensuring a focus on outcomes is central. There needs to be a level of flexibility to ensure agility in connecting at the required moment for action. The WBA-PCAB has used these principles to map the stakeholders. Recognising the importance of both the stakeholders’ level of interest as well as their capacity to influence the process, Figure 10.6 captures an approach to stakeholder engagement. This model categorises stakeholders according to their relative interest in a project, versus their influence and/or power that could be leveraged to facilitate success.

■ Lessons learnt

We highlight five key lessons learned over the life course of this project:

- *Change management:* Early adoption of a clear management plan for change is an essential feature of the successful rollout of a transformative initiative. There is a need for an early commitment to the shift to competency-based medical education (CBME) of which WBA is an

essential ingredient. Cooper and Holmboe (2025) position this as a moral imperative in which there is a need to build a shared mindset, committing to change across a sector.

- *An agentic legal persona*: It is essential to establish a shared legal persona in which to house the multiple interactions of collaborators as well as to support future developments.
- *Relationships are dynamic*: The reality of such a national project has meant relationships between partners change over time, depending on current leadership and the stability of each context for learning. It becomes important to be aware of these changes and build supportive conversations in an iterative process over time.
- *Development of regular check-in metrics*: A clear monitoring and evaluation system should be established at the start of a project. This enables constant checking that each partner has been able to move in a similar manner to others over time.
- *Communication*: This foundational feature is an important part to ensure adequate and continuous awareness of the multiple processes required. Different axes of communication need to be established, linking various tiers of the rollout of the project and effective processes to ensure that different levels are connected seamlessly.

■ Engagements

It has been argued that successful change in assessment is enhanced by an adaptive understanding of the ecosystem in which that change is occurring. This adaptive ecosystem is usually quite complex, and in the case of the South African situation, this proved to be true. To understand this complexity, we relied on the collective wisdom of colleagues (Hays et al. 2024). Consequently, the ‘six P’ schema, outlined in Table 10.2, proposes six Ps of engagement which have been a feature throughout this project. The dynamic interaction between each of these components has emphasised the complexity of the medical specialist system within SA and the attempts to change a traditional time-based assessment practice to a clinical competency assessment practice.

Using these signals, we have inserted the South African experience. *Permission* is an important starting point, which is also iterative throughout the journey, ensuring that all service is learning and all learning is service. This facilitates the responsiveness to the context in which clinical learning takes place. The promise of better outcomes for patients has been complemented by the support and development of the trainees towards a fitness-for-purpose to serve in the South African context. *Power* and *people* recognise that the asymmetries in both the system and across multiple relationships in a changing landscape need to be managed intentionally. The South African context demonstrates the number of

TABLE 10.2: The 6P schema for understanding complexity in assessment practice.

Ps of engagement	Descriptors	South African journey
Permission	Think outside the square Creative scholarship Direction and support of senior leaders	Learning from the coronavirus disease 2019 experience Evidence-based reflection on clinical competence Serving while learning and/or learning while serving
Promise	Improvement on patient outcomes	Focus on positive patient experience with focus on safety Improved trainer capacity Fit for purpose graduates
Power	Early reflection on power dynamics Noting power differentials within relationships	Ensuring representative groups on board (CMSA, SACOMD) Keeping all universities on steering committee
People	Stakeholders who value outcome with no assessment expertise Mapping of stakeholders	SACOMD CMSA Clinical supervisors Trainees (representative structure established) Provincial and/or National clinical platform management Joint Health Sciences Education Committee National Academic Pathology Committee
Practice	Current context to best practice Faculty development	EPA101 (induction) to SWAT qualification (Training the trainers) Local workshops at each university
Provision of resources	Change requires resources	DHET grant funding Independent vehicle for processing (Consortium)

Source: Compiled by Sumaiya Adam using information from RB Hays et al., 'Managing assessment during curriculum change: Ottawa Consensus Statement', *Medical Teacher*, vol. 46, no. 7, pp. 874–884, <https://doi.org/10.1080/0142159X.2024.2350522>

Key: CMSA, Colleges of Medicine of South Africa; SACOMD, South African Committee of Medical Deans; DHET, Department of Higher Education and Training; SWAT, Supervisor Workplace Assessment & Training.

people who must be engaged in ways that recognise and respond to the prevailing hierarchies. Best *practice* has been drawn from global experience and translated within the local contexts.

■ Future research

This work is dynamic and will continue to build on the historical actions as well as build future-facing actions to facilitate achieving the goals of the project.

A useful template for considering future research endeavours may be framed using Table 10.1. This could mean a focus on innovative assessment practices within specific clinical disciplines that are reflective of their unique training needs; integrating patient safety to trainee outcomes, exploring the concept of patient safety as a sociological construct, exploring stakeholder perspectives of fit-for-purpose specialists for the local context and including civil society voices in assessment practice.

A monitoring and evaluation framework would best address the areas of engagement listed in Table 10.2. Permission to embark on a national project is dynamic and would need constant adaptation. Promise, built on better patient outcomes, becomes a responsive dimension that includes ensuring nurturing learning relationships in the context of learning, the trainee and those who do the training. There is little direct research on the power relationships within and across the various learning contexts within South African specialist medical education. A deeper understanding of these structural and interpersonal relationships will further future-proof developments. This understanding of people needs to continually evaluate and respond to the various sectors of individuals who are involved in the WBA journey, as well as those who may be affected by such a movement. The continual commitment to practice that is kept at the highest standard would need to be subjected to constant and iterative evaluation and recording for future generational learning.

The conversation about monitoring and evaluation must necessarily lead to considerations about continuous quality improvements. Workplace-based assessment takes hold at the intersection of two complex systems: health services and higher education, and when one factors in all the cultural, resource and interpersonal dynamics, quality improvement must necessarily appreciate this accumulated complexity. This must definitely be an area for future attention.

■ Conclusion

The journey to full WBA implementation in SA is not yet complete. However, the essential stakeholders have been integrated into the process, resources have been procured and a thoughtful monitoring and evaluation process has been implemented. Trainee voices have been actively elevated and innovative faculty development is underway. There are successful pilot projects across a variety of institutions. While acknowledging that there are still many steps to be taken, the journey of a thousand steps has commenced.

Practice points

- Establish a legal foundation early.
- Ensure a sound governance structure to support implementation.
- Appoint champions to ensure sustained implementation.
- Ensure faculty development is in place.
- Expect to encounter complex challenges during change management.

- Have a communication strategy for stakeholder engagement.
- Engage with resistance early, empathically and meaningfully.
- Trainees are stakeholders – onboard them early.
- Ensure sound administration and documentation of the process.
- Create a monitoring and evaluation plan.
- Identify research opportunities.

■ Declarations

■ Ethical considerations

This chapter did not require ethical clearance or consent as it synthesises existing literature and does not present primary research.

■ Authors' contributions

Tasleem Ras: Writing – original draft, Writing – reviewing & editing.

Lionel Green-Thompson: Writing – original draft, Writing – reviewing & editing.

Gert van Zyl: Writing – original draft, Writing – reviewing & editing.

All authors reviewed the chapter, contributed to the discussion of results, approved the final version for submission and publication and take responsibility for the integrity of its findings.

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The views expressed in this chapter are the authors' own and not an official position of the institution, funder or the publisher.

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Trust and entrustability in medical specialist training in South Africa: An Ubuntu-inspired pedagogy explores the implementation of workplace-based assessment (WBA) in medical specialist training within the South African and broader African context. Drawing on locally generated research, international evidence and the authors' extensive experience in specialist education, it presents a socially accountable approach to assessing clinical competence beyond a single high-stakes examination. Framed through realist and Ubuntu perspectives, the book examines the opportunities and challenges of implementing WBA in resource-constrained and culturally diverse health care settings.

This book offers a timely and insightful contribution to the growing field of WBA, providing a comprehensive and contextually grounded guide for educators, clinicians and institutions navigating its implementation. Across its chapters, the volume thoughtfully balances conceptual foundations with practical strategies, addressing a critical gap for disciplines that lack established structures to support WBA. The inclusion of Ubuntu-inspired pedagogy is a distinctive strength, offering a uniquely South African lens that enriches the understanding of assessment, supervision and professional identity formation.

The book's structure moves from theoretical framing to applied guidance, including step-by-step guidance on entrustable professional activity (EPA) development, thoughtful discussions of entrustment and patient safety, and nuanced examinations of learning environments, feedback practices and digital portfolios. *Trust and entrustability in medical specialist training in South Africa: An Ubuntu-inspired pedagogy* excels in integrating theory with contextual realities, acknowledging challenges such as hierarchical cultures, resource limitations, inconsistent feedback and the complexities of ePortfolio adoption.

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