Original Article

Journal of Advances in Medical Education & Professionalism

Assessing Progress, Shaping Futures: A Qualitative Exploration of Final-Year Medical Students' Perspectives on the Clinical Assessment for Progression Examination (Clinical APEx): A Novel Competency-Based Exam

HOSSAIN MD NASSIF[1*], MPH, GCTE, PhD Candidate; YEW WEI PING[1,2], MBBS (Hons); KUMAR ARUNAZ[2], MD, PhD; BARTON J. M. PETER[2], Ed.D, MBChB; KARIM MD NAZMUL[1], MBBS, PhD; LEECH MICHELLE[2], MBBS (Hons), PhD; ILIC DRAGAN[1], GCHPE, PhD

[1]School of Public Health and Preventive Medicine (SPHPM), Monash University, Melbourne, Australia; [2]Faculty of Medicine, Nursing and Health Sciences (MNHS), Monash University, Melbourne, Australia

Abstract

Introduction: Traditional OSCEs, while reliable, are criticized for limited authenticity, delayed feedback, and high stress. The Clinical Assessment for Progression Examination (Clinical APEx), a new competency-based assessment at Monash, was developed to address these issues.

Methods: We conducted an interpretivist qualitative interview study with 33 final-year medical students who completed both the Clinical APEx and OSCE, recruited via post-assessment survey and site-wide invitations. Semi-structured Zoom interviews were analysed using inductive reflexive thematic analysis.

Results: Analysis revealed four key themes: Authenticity and Empathy, Feedback and Learning, Supportive Environment, and Challenges, which included concerns about standardisation, subjectivity, and under-assessment of clinical reasoning.

Conclusion: Beyond describing a local innovation, this study highlights broader mechanisms of educational impact, particularly authenticity, feedback, and psychological safety, that can inform assessment design across contexts. The Clinical APEx serves as a case example for reimagining high-stakes assessment as assessment for learning rather than solely of learning. These findings provides conceptual insights as to how clinical assessments might be made both rigorous and developmentally meaningful.

Keywords: Clinical competence, Competency-based education, Medical education, Medical students, Qualitative research

**Corresponding author:*
Md Nassif Hossain, PhD;
Department of Epidemiology and Preventive Medicine, School of Public Health and Preventive Medicine, Monash University, Level 1, 553 St Kilda Road, Melbourne VIC 3004, Australia
Tel: +61-39903 0186
Email: mdnassif.hossain@monash.edu

Please cite this paper as:
Nassif HM, Ping YW, Arunaz K, Peter BJM, Nazmul KM, Michelle L, Dragan I. Assessing Progress, Shaping Futures: A Qualitative Exploration of Final-Year Medical Students' Perspectives on the Clinical Assessment for Progression Examination (Clinical APEx): A Novel Competency-Based Exam. J Adv Med Educ Prof. 2026;14(3):238-248. DOI: 10.30476/jamp.2026.109580.2311.

Received: 14 November 2025
Accepted: 10 February 2026

Introduction

The Objective Structured Clinical Examination (OSCE), introduced by Harden and colleagues in the 1970s, has long served as the gold standard for assessing clinical competence in undergraduate medical education (1). Its structured, station-based format offers reliability and standardization across institutions (2, 3). However, despite its strengths, growing concerns have emerged regarding its authenticity, which is the extent to which an assessment mirrors the complexity and interactional flow of real clinical work (4), limited feedback, and the stress it induces in students (5, 6). These limitations are especially problematic in an era that increasingly values meaningful feedback, professional identity formation, and assessment *for learning* over assessment *of learning* (7, 8).

Recent critics argue that OSCEs often fail to mirror the complexity of real clinical practice and rigid checklists can reduce nuanced clinical reasoning and communication to mechanical performance (9, 10). Additionally, the COVID-19 pandemic exposed vulnerabilities in OSCE delivery, leading to widespread reliance on virtual or modified formats, many of which struggled to assess procedural skills effectively (11, 12). As medical education shifts toward competency-based medical education (CBME), these challenges are driving a rethink of traditional assessments. High-stakes decisions increasingly require designs that balance rigor with authenticity, feedback, and feasibility across distributed sites, needs that can expose the limits of resource-intensive, tightly standardized OSCE circuits.

CBME, widely adopted in postgraduate training, is gaining traction in undergraduate curricula as well (13, 14). It emphasizes developmental, programmatic assessment and aims to ensure graduates are work-ready by demonstrating competence across multiple domains, including communication, collaboration, and professional behavior (15, 16). However, implementing authentic and learner-centered assessments within CBME remains a key challenge (17, 18).

Formative OSCE designs that foreground feedback can shape the learners' perceptions of value and improvement, underscoring the importance of timely, dialogic feedback in clinical skills assessment (19). Research on the clinical learning environment in competency-based settings similarly suggests that perceived support and psychological safety influence learning behaviors and willingness to take interpersonal risks (20). Here, psychological safety refers to a shared belief that it is safe to take interpersonal risks (e.g., asking questions, acknowledging uncertainty) during learning and assessment interactions (21). Furthermore, studies of simulated patient (SP) roles and competencies further indicate that SP feedback can meaningfully support learning when authenticity and communication are central outcomes (22). These insights align with broader efforts to move beyond traditional OSCE constraints by embedding authentic clinical encounters and dialogic feedback within assessment designs, an approach operationalized in the Clinical Assessment for Progression Examination (Clinical APEx) introduced at Monash University in 2022.

The Clinical APEx is a high-stakes summative assessment designed to capture workplace-relevant performance through direct observation in clinical environments. It consists of an observed encounter at the student's clinical site with an unscripted simulated patient and an examiner using a domain-based rubric, with immediate examiner and simulated-patient feedback (further procedural and contextual detail is provided in Box 1 below). Unlike the OSCE, the Clinical APEx integrates immediate, personalized feedback, promotes assessor-learner interaction, and prioritizes holistic, contextualized judgment over checklist-driven evaluation (23, 24). It aims to re-establish assessment as a socially mediated learning experience grounded in sociocultural theory (25).

Table 1 summarizes the competency domains used to structure examiner judgement in the Clinical APEx, alongside brief examples that illustrate what performance within each domain may look like in practice. Domains marked "if relevant" are applied according to the clinical presentation and systems sampled, allowing the assessment to remain adaptable to context while still anchoring decisions to shared criteria. The "Overall Outcome" category (Commendation, At Standard, Nearly at Standard, Not Yet at Standard) provides a global progression judgement informed by performance across the assessed domains and supports the delivery of targeted feedback.

The Clinical APEx embodies a pedagogical shift that seeks to bridge the gap between assessment and clinical reality. However, the success of such a shift depends heavily on how assessments are perceived by those at the center of the learning process: students. Research consistently shows that learner perceptions shape engagement, credibility, and the educational impact of assessments (29, 30).

Box 1. Clinical APEx overview: Theoretical foundation, assessment format, and implementation context

The Clinical APEx is grounded in sociocultural theory, which views learning as socially mediated through meaningful activity (25–27). Drawing on Vygotsky's concept of the zone of proximal development (ZPD), the gap between independent performance and what can be achieved with support (27), the Clinical APEx leverages structured feedback and authentic tasks to scaffold learning and co-construct knowledge. From a communication standpoint, the Clinical APEx makes capability expectations explicit, helping students better understand performance standards and encouraging behaviours aligned with professional growth and self-regulated learning.

Clinical APEx format and procedures. Each Clinical APEx comprises a single observed encounter (rather than a circuit), conducted on-site at students' clinical locations with an unscripted simulated patient (SPs) and an examiner using a domain-based rubric (Approach to the patient; Communication; History; Examination/Procedural skills; Clinical reasoning; Investigations/Management; Overall outcome). The assessment runs between 15–30 minutes when two systems are sampled. Immediate, dialogic feedback is given verbally by the examiner and the simulated patient and captured in PebblePad. PebblePad is a digital learning and ePortfolio platform that lets learners capture evidence, reflect on progress, and showcase achievements while enabling educators to design activities and assess work (28). Students who have not met the standard are offered re-sit opportunities. Procedurally, the Clinical APEx differs from OSCEs beyond feedback timing in several ways: (i) holistic, judgement-based ratings across capability domains rather than checklist scoring; (ii) asynchronous, site-flexible delivery using a bank of brief, one-page SIM scripts aligned to core presentations (no need for identical stations across sites); and (iii) progressive sampling of assessors across attempts (first attempts usually one examiner; later attempts add a second examiner and recording where appropriate) to strengthen decision quality. These features were used in final-year examination and are consistent with the broader Clinical APEx implementation across the MD program.

Implementation Context. The Clinical APEx was introduced in final year as an additional progression assessment after the cohort completed their penultimate-year clinical skills evaluation online via the Monash Online OSCE (MONSCE) during COVID-19 (12). As Monash University did not traditionally conduct OSCEs in final year, the Clinical APEx was implemented to ensure physical examination skills were adequately assessed. It evaluates physical and communication skills asynchronously across sites using unscripted simulated patients. Student performance is assessed against the competency domains outlined in Table 1: Final-year Clinical APEx Competency Domains. Results (Commendation, At Standard, Nearly at Standard, Not Yet at Standard) and feedback are delivered immediately after the assessment, with re-sit opportunities for students who have not yet reached the standard. Attaining an 'At Standard' grade or higher in the Clinical APEx, a summative assessment, is required to graduate and progress to internship. Though initially introduced as a supplementary measure, the Clinical APEx has since become the official clinical skills assessment in the final year.

Table 1. Final-year Clinical APEx Competency Domains

Competency Domains	Example
Approach to the patient	Can converse comfortably and naturally with the patient as they proceed through the task in a way that looks as if they have spent a lot of time with patients.
Communication with the patient	Student can consistently modify their communication, pace, tone or content in response to feedback from patient or emotional/physical discomfort of patient.
History Skills, if relevant	Is using open questions and systems review questions that are relevant to the presenting complaint.
Examination/Procedural Skills Techniques, if relevant	Are performed for the correct duration, in the correct place at the correct pressure and using technique which appears proficient and practiced.
Clinical Reasoning Skills, if relevant	Can select and justify the most likely diagnosis
Investigations and Management, if relevant	The student can efficiently interpret common investigations provided
Overall Outcome	Given as: Commendation, At Standard, Nearly at Standard, Not Yet at Standard

While perceptions of OSCEs are well documented (5, 6), an evidence-based gap remains in qualitative understanding of the students' experiences of a high-stakes progression examination that uses holistic, domain-based judgement and incorporates immediate examiner and simulated-patient feedback, particularly in cohorts able to directly compare this format with the OSCE.

This study addresses that gap by exploring how Monash University's 2024 final-year medical students, a unique cohort exposed to both the OSCE and Clinical APEx, perceive these two assessments. Positioned at the threshold of internship, these students offer critical insights into the role of competency-based assessments in shaping preparedness for clinical practice, which refers to learners' perceived readiness to undertake the tasks and responsibilities of the next stage of training (31). The comparative reflections of these students provide a lens through which to evaluate the acceptability, authenticity, and developmental value of the Clinical APEx relative to the OSCE.

Therefore, we framed the study around the following research questions: 1) How do final-year medical students experience the Clinical APEx? 2) How do they compare this experience with the OSCE?

While the Clinical APEx is unique to one institution, its value lies less in promoting a single model and more in illuminating what features of assessment drive learning. Specifically, the Clinical APEx enables us to interrogate how authenticity, immediacy of feedback, and psychological safety,

principles grounded in sociocultural learning theory, shape students' engagement and professional development. By examining these mechanisms, this study offers transferable lessons for others grappling with the limitations of OSCEs and the challenge of aligning summative assessment with the goals of competency-based medical education. In this way, the Clinical APEx functions as a case for theorising clinical assessment towards the goal of producing competent, confident and safe medical graduates.

Methods

Study design

An interpretivist qualitative study was carried out using semi-structured individual interviews conducted online to explore how final-year medical students experienced the Clinical APEx and how they compared it with the OSCE.

Participant Selection

Thirty-three final year Monash University Doctor of Medicine (MD) medical students (2024 Cohort) who completed both the Clinical APEx and OSCE assessments were recruited for the study. Following the final-year Clinical APEx, students across clinical sites were invited to participate via an online survey (n=538). Inclusion criteria: final-year MD students in the 2024 cohort who completed both Clinical APEx and OSCE and consented to interview. Exclusion criteria: students who did not complete both assessments or who declined/withdrew consent. Recruitment was conducted through email invitations and digital flyers containing a QR code that was directly linked to the survey. Students who completed the survey (n=93, response rate=17.3%) were subsequently given the option to volunteer for a follow-up semi-structured interview for the study. We completed 33 interviews in total representing the total number of students who had volunteered to participate for an interview. After approximately 30 interviews, few new perspectives emerged and subsequent interviews largely elaborated on existing collected data, suggesting thematic saturation.

Data Collection

A semi-structured interview guide was developed by MNH and WPY and subsequently reviewed and refined by AK and DI, all of whom are experienced educators. The interview guide covered four domains: 1) initial impressions and preparation, 2) stress/ anxiety and logistics/ technology, 3) feedback, authenticity, marking/ standardisation, and comparisons with other assessments (including the OSCE), and 4) suggested modifications and final comments. Within each domain, open-ended questions were followed by prompts/probes. Over a two-month period (September–October 2024), 33 individual interviews were conducted. All participants provided informed consent prior to interview; participation was voluntary and did not influence academic progression. Assessment executives (AK, PB, ML) were not involved in recruitment or interviews and had no access to participant information. Transcripts were de-identified and manually verified for completeness and accuracy by MNH.

All interviews were conducted via Zoom™, recorded, and transcribed using the platform. Using Zoom™ ensured equitable participation across central, rural, and international sites, enabling broader representation and inclusion of diverse student voices. MNH, who was not involved in teaching or assessment, conducted all interviews. Recordings and transcripts were stored on password-protected, institution-approved systems with access restricted to the research team and were de-identified prior to analysis.

Research Team and Reflexivity Statement

Reflexivity is vital in qualitative research, helping readers assess the credibility of analysis through the researchers' positionality (32). Our team reflects diverse academic and clinical backgrounds and research experience. MNH and WPY are early-career qualitative researchers. MNH has a background in biostatistics and data analysis, while WPY is a general practitioner (GP) and medical educator involved in student assessment. AK, a senior clinician and education researcher, brings over a decade of qualitative research expertise. DI, deputy head of school, offers leadership in evidence-based education. NK has expertise in quantitative health professions education research and clinical epidemiology. PB, a former director of assessment and practicing GP, adds knowledge in assessment design. ML, deputy dean and rheumatologist, provides institutional insights into medical training.

We recognise a risk of social desirability bias, given interviews occurred close to graduation and within the institution that implemented the assessment. To mitigate this, interviews were conducted by MNH, who had no teaching/ assessment role, and assessment leaders had no access to identifiable data.

Data Analysis

We analysed the transcripts using reflexive thematic analysis, with a primarily inductive,

semantic coding approach while remaining sensitised to the sociocultural framing of our study (33). All 33 transcripts were initially coded by MNH, who iteratively refined the codes into themes using ATLAS.ti™. To enhance reflexivity and analytic robustness, WPY independently coded two transcripts and met with MNH to refine code meanings and theme definitions. Coding was consistent between MNH and WPY, with no significant differences identified.

Ethical Consideration

Ethics approval was granted by the Monash University Human Research Ethics Committee, Project ID: 41787.

Results

Participants had a mean age of 24 years, with ages ranging from 22 to 26 years. Gender distribution among the participants was balanced, with 16 males (48.48%) and 17 females (51.52%). Most of the participants were undergraduate students (22 participants; 66.67%), while 11 participants (33.33%) were postgraduate students.

Based on the thematic analysis of 33 semi-structured interviews, four key themes were identified: Authenticity and Empathy, Feedback and Learning, Supportive Environment, and Challenges (Table 2). These themes are interpreted not only as descriptions of the students' experiences but also as indicators of mechanisms of assessment impact with relevance beyond a single institution. Authenticity, feedback, and supportive environments emerged as core drivers of perceived educational value, while challenges underscored enduring tensions between authenticity, standardisation, and comprehensiveness. Understanding these themes as mechanisms, rather than idiosyncratic features of one exam, positions the findings to contribute to broader debates in health professions education.

Table 2 provides an analytic pathway showing how the reflexive thematic analysis moved from initial coding to sub-themes and then to four overarching themes that capture students' experiences of the Clinical APEx. The example codes illustrate the kinds of comments that populated each sub-theme and demonstrate how interpretations were grounded in the participants' accounts. Presenting this pathway enhances transparency by clarifying how the final themes were developed from the dataset.

Comparison with OSCE

When comparing Clinical APEx with OSCEs, the participants emphasised greater authenticity and a more natural interactional flow, describing it as "a much more authentic way to assess our skills… a real-life scenario" (Participant 29), alongside the educational value of immediate, dialogic feedback ("the feedback was instant," Participant 21; simulated patient feedback was "invaluable," Participant 33). In contrast, OSCEs were more often associated with checklist-oriented performance and a less supportive tone, with one participant describing Clinical APEx as "so much more encouraging than OSCE" (Participant 16). However, some students viewed OSCEs as more standardised, whereas Clinical APEx raised concerns about variability across examiners and sites (Participant 8; Participant 18). The themes below elaborate these comparative perceptions in detail.

Theme 1: Authenticity and Empathy - Supporting professional identity formation and transfer to practice

Participants described the Clinical APEx as

Table 2. Analytic Pathway of the Themes and Sub-themes of the Clinical APEx

Final Theme	Sub-theme	Example Codes
Theme 1: Authenticity and Empathy	Clinical competence	"shows real clinical skills"; "competence in context/workplace-relevant performance"
	Genuine evaluation	"less scripted than OSCE"; "natural interaction/felt real"
	Holistic assessment	"not checklist"; "integrates skills"; "overall judgement"
	Interpersonal skills	"rapport-building"; "communication matters"; "empathy demonstrated"
Theme 2: Feedback and Learning	Real-time feedback and learning	"instant feedback/learning in the moment"; "immediate linkage to actions"; "SP feedback adds realism"
	Constructive criticism	"supportive tone"; "specific and actionable"; "encouraged growth"
	Reflection and improvement	"prompted reflection"; "identified development areas"
Theme 3: Supportive Environment	Structured format	"clear expectations/ reduced ambiguity"; "consistent framework"
	Psychological safety	"less fear of judgement"; "comfortable to engage"
	Collaborative atmosphere	"encouraging and supportive examiner/SP"; "felt coached not judged"
	Positive experience	"less intimidating"; "reduced stress/felt relaxed"
Theme 4: Challenges	Standardisation issues	"site variability"; "inconsistent experiences"
	Subjectivity in grading	"examiner preference"; "judgement differs/uncertainty about fairness"
	Need for clinical reasoning	"clinical reasoning under-assessed"; "diagnostic thinking missing"

a more authentic and patient-centred evaluation of their clinical performance, especially in comparison to traditional OSCEs.

"*I felt like it was a much more authentic way to assess our skills... it felt more like a real-life scenario.*" (Participant 29)

A key factor contributing to this realism was the nature of patient interactions, which felt more natural and less scripted. Sub-themes included *clinical competence*, *genuine evaluation*, and *holistic assessment*, as students noted that the Clinical APEx allowed a more comprehensive and authentic demonstration of both technical and interpersonal abilities. This realistic setup enabled the students to engage meaningfully with patients, creating space to demonstrate empathy, interpersonal skills, and communication in a way that mirrored real clinical encounters.

"*The empathy aspect was really highlighted... it wasn't just about checking boxes, but about connecting with the patient.*" (Participant 19)

"*It felt like they were assessing not just what I knew, but how I interacted with the patient, which is so important.*" (Participant 2)

The assessment of *interpersonal skills* within a more natural interaction was particularly appreciated, reinforcing its authenticity. As such, the Clinical APEx was valued not only for assessing clinical competence but also for its emphasis on relational aspects of care, moving beyond technical checklists used in traditional OSCEs. Participants described it as a more genuine and comprehensive assessment, incorporating both clinical knowledge and soft skills like empathy and rapport-building.

"*I could really show my ability to empathize with the patient, which is crucial in real practice.*" (Participant 28)

Theme 2: Feedback and Learning - Positioning assessment as formative within summative

Participants described real-time feedback as a defining strength of Clinical APEx and a driver of immediate learning.

The feedback was instant, and it really helped me to reflect on my performance right away." (Participant 21)

Sub-themes such as *real-time feedback and learning*, *constructive criticism*, and *reflection and improvement* emerged strongly, with students highlighting how these elements supported continuous performance refinement. Unlike the traditional OSCE that may often delay or lack feedback, the Clinical APEx enabled students to engage in dynamic, on-the-spot reflection and assist future improvement. This immediacy allowed students to make meaningful connections between their actions and outcomes, reinforcing the Clinical APEx as an assessment for learning.

"*I loved getting feedback on the spot; it made me feel like I was learning in real-time.*" (Participant 4)

Participants also emphasised the value of constructive criticism, particularly the supportive tone adopted by both examiners and simulated patients. Rather than feeling judged, students reported feeling encouraged to grow, a key aspect of what made the feedback process effective and psychologically safe.

"*Having the simulated patient give feedback was invaluable... it made me think about how I could improve.*" (Participant 33)

"*The examiners were really constructive with their feedback, which made me feel supported.*" (Participant 23)

This environment fostered reflection and improvement, helping the learners identify specific areas for development and build confidence in their clinical and interpersonal skills.

Theme 3: Supportive Environment - Enabling psychological safety in high-stakes settings

Participants described the Clinical APEx as a more supportive and less intimidating environment compared to traditional high-stakes assessments like OSCEs.

"*The atmosphere was much more encouraging than OSCE; I felt like I could really be myself.*" (Participant 16)

A key contributor to this was the structured format of the Clinical APEx, which provided clear expectations and a consistent framework. Key sub-themes such as *structured format*, *psychological safety*, and a *collaborative atmosphere* contributed to a less stressful and more empowering assessment experience. This clarity reduced ambiguity and helped students focus on their performance rather than worrying about the process itself.

"*I felt much more relaxed... the environment was supportive, and it made a big difference.*" (Participant 10)

The Clinical APEx format also actively fostered psychological safety, creating a space where students felt they could engage authentically without fear of harsh judgment. This sense of safety stemmed in part from the collaborative atmosphere; students noted that the tone of the examiners and simulated patients was encouraging, rather than purely evaluative.

"*Knowing that the examiners were there to support us rather than just judge us made a huge difference.*" (Participant 3)

These features contributed to a *positive experience*, where students felt supported and motivated to perform at their best. The focus was perceived to be on growth and development, not just assessment, which helped students to feel more confident and motivated.

"*It was a positive experience overall... I think the way it was set up really helped us to perform better.*" (Participant 19)

These factors combined to make the experience a genuinely positive one for many students. The combination of structure, support, and constructive engagement enhanced not only performance but also overall satisfaction with the assessment process. Participants noted that feeling relaxed and understood by the assessors enabled them to show their true abilities and build self-assurance.

Theme 4: Challenges: Highlighting the tension between authenticity and standardisation

While the Clinical APEx was broadly perceived as a valuable and authentic learning experience, participants also reported challenges that limited its perceived fairness and educational completeness.

"*There are definitely issues with standardisation... it feels like different sites have different expectations.*" (Participant 8)

Sub-themes such as *standardisation issues*, *subjectivity in grading*, and the *need for clinical reasoning* were raised as concerns that affected the reliability and comprehensiveness of the assessment. Participants reported concerns surrounding the lack of standardisation between examiners and across different assessment sites.

"*Sometimes it feels like the grading is very subjective... it can vary a lot depending on the examiner.*" (Participant 18)

Some perceived examiner judgement as "subjective," especially when expectations differed by clinical context or specialty norms and felt this could affect fairness across sites. The interpersonal nature of the Clinical APEx, while generally appreciated, introduces variability in how different examiners interpreted and rated performance. Participants noted that individual examiner preferences could influence outcomes, which led to uncertainty about the objectivity of their results. Others accepted variability as an inevitable trade-off for authenticity but wanted stronger calibration and clearer benchmark exemplars.

Another key concern was the limited assessment of clinical reasoning.

"*The focus on certain skills sometimes overlooks the importance of clinical reasoning, which is crucial.*" (Participant 11)

Some students felt that the Clinical APEx placed greater emphasis on communication and procedural skills,; while these were seen as strengths, there was a sense that core diagnostic thinking and decision-making skills were sometimes under-assessed. This raised questions about whether the Clinical APEx provided a comprehensive measure of clinical competence.

Discussion

This study contributes to conceptual debates about clinical assessment by identifying authenticity, immediacy of feedback, and psychological safety as the mechanisms through which assessment can influence learning. These mechanisms are not unique to the Clinical APEx, rather they highlight principles that could inform the redesign of OSCEs, workplace-based assessments, or hybrid models. In this sense, the Clinical APEx serves as a case study for theorising the conditions under which summative assessment also functions as assessment for learning. Importantly, the findings also surface a familiar tension: the more authentic and relational an assessment becomes, the harder it is to ensure standardisation and objectivity (34, 35). Addressing this tension is central to advancing the field's understanding of how to design clinical assessments that are educationally meaningful.

Implications for programmatic assessment and WBA

Taken together, our data position the Clinical APEx as a summative, high-stakes workplace-based assessment that complements, rather than replaces, tools such as the mini-CEX and DOPS within a programmatic assessment model (36–38). In practical terms, APEx contributes an additional, authentic evidence point that combines holistic, domain-based global judgements with immediate, dialogic feedback from examiner and simulated patient (MSF-like), and site-flexible delivery in real clinical contexts (4, 39). Aggregated with other WBAs, these features strengthen triangulation and the defensibility of progression decisions within competency-based education frameworks (38, 40, 41). Beyond contrasting APEx with OSCEs, our contribution is to show how a single high-stakes observed encounter can operationalise assessment-for-learning principles: (i) replacing checklists with capability-domain judgements while maintaining transparency; (ii) using unscripted SPs (and real patients where appropriate) plus mandated feedback to preserve authenticity; and (iii) addressing standardisation concerns via

structured re-sit pathways that escalate sampling (e.g., additional examiners/recording) without sacrificing educational value (37, 38).

Authenticity and empathy were common threads throughout the themes of this study, with participants highlighting that the Clinical APEx format provided a more realistic and meaningful assessment of both clinical and interpersonal skills. Participants reported that the Clinical APEx's emphasis on realistic patient interactions fostered genuine engagement and allowed them to demonstrate empathy in ways that more traditional assessments do not. This is consistent with McLachlan, et al., who argue that authentic assessments enhance learning by aligning evaluation with real-world practice, thus fostering more meaningful educational experiences (42). Similarly, van der Vleuten and Schuwirth emphasize the value of programmatic assessment, which involves collecting data across multiple time points to build a comprehensive picture of learner development (7). The Clinical APEx aligns well with this approach, serving as a valuable tool within a broader programmatic framework by contributing rich, contextualized insights into professional competence within and across years. In contrast, OSCEs have long been critiqued for their structured and checklist-driven nature, which can strip away the complexity and nuance of real clinical encounters, limiting the opportunity for authentic expression of empathy (43).

Participants appreciated the immediacy and relevance of feedback received during Clinical APEx assessments, which they felt directly supported their development. This aligns with the work of Hattie and Timperley, who emphasize the transformative power of timely and targeted feedback in driving learning outcomes (44). Likewise, Shute asserts that formative feedback is essential for guiding learners toward improvement, especially when it is specific, actionable, and delivered in real-time (45). The Clinical APEx's provision of immediate feedback contrasts with traditional OSCEs, which often delay feedback until well after the assessment has concluded. As Burgess et al. note, delayed feedback in clinical education can diminish its impact and limit the students' capacity for immediate reflection and adjustment (46).

Participants described the Clinical APEx as a psychologically safe space that reduced anxiety and promoted intrinsic motivation. This perceived supportiveness appears to enhance performance and engagement, as suggested by Boud and Molloy, who argue that emotionally supportive learning environments help learners take ownership of their development and reduce performance-related stress (47). Similarly, research by Kassab et al. highlights how a positive educational environment can significantly impact students' well-being and academic performance in health professions education (48). Conversely, OSCEs have been associated with heightened anxiety levels due to their rigid, high-stakes nature, which can negatively affect the students' performance (18).

Participants voiced concerns about potential subjectivity in examiner assessments and the variability of criteria applied. This is in line with the findings of Wass et al., who stress the importance of structured, reliable methods to ensure fair and consistent evaluation in clinical assessments (49). While the Clinical APEx offers a more authentic and learner-centered approach, efforts must be made to enforce standardised rubrics and train examiners to maintain inter-rater reliability.

The sociocultural conceptual framework highlights how the Clinical APEx fosters clinical skills through socially mediated learning processes (Figure 1). It emphasizes the integration of authenticity, empathy, real-time feedback, and supportive environments within Vygotsky's Zone of Proximal Development (ZPD). The Clinical APEx enables students to engage in meaningful social interactions and reflective practices facilitated by dialogic feedback from examiners and simulated patients. However, inconsistencies in standardisation and limited clinical reasoning assessments may disrupt the learners' internalisation of professional norms.

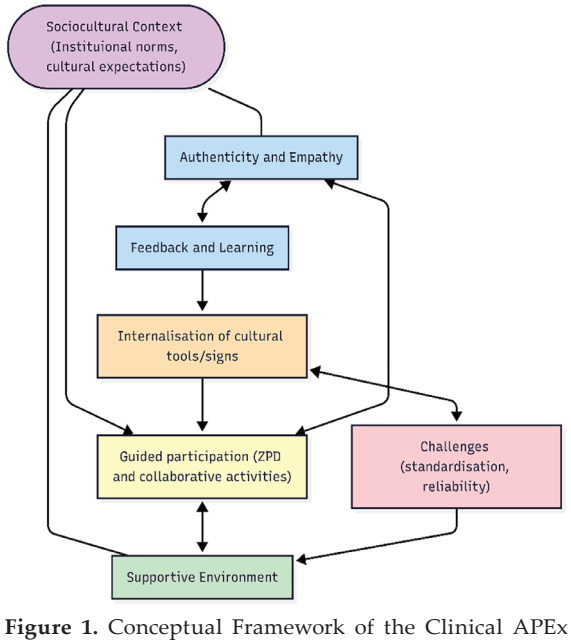

Figure 1. Conceptual Framework of the Clinical APEx Informed by Sociocultural Theory

Ensuring consistency across contexts is critical for the Clinical APEx to effectively support the students' professional development and integration into clinical practice communities.

Implications for practice and policy

If institutions adopt assessments such as the Clinical APEx, the findings suggest prioritising 1) assessor development focused on shared standards and narrative feedback quality, 2) explicit calibration resources (benchmark videos, exemplars, moderation meetings) to mitigate perceived fairness concerns, 3) deliberate sampling strategies which may involve more than one assessor and/or multiple re-attempts for high-stakes decisions, and 4) structured integration of SP feedback to strengthen communication and patient-centred outcomes. Where OSCEs remain necessary, OSCE redesign can incorporate these mechanisms (e.g., immediate richer dialogic feedback and increased interactional authenticity).

Strengths and limitations

A key strength of this study is its qualitative design, which captured detailed accounts of final-year medical students' experiences of the Clinical APEx and direct comparisons with OSCEs. However, findings should be interpreted considering some limitations. The study was conducted at a single institution and includes only student perspectives, which may limit transferability to other settings. Participation was voluntary, introducing self-selection and potential positive-response bias, and the data reflect subjective self-report rather than objective performance or longitudinal outcomes. We did not collect or analyse Clinical APEx attempt number, performance level, or rotation type, so we could not examine whether perceptions differed by borderline status, resit experience, or specialty context. We did not triangulate the findings with examiner or simulated-patient perspectives, assessment artefacts, or progression outcomes; therefore, conclusions are limited to participants' perceived effects and experiences rather than demonstrated reliability or validity.

Future research

Future studies should (i) triangulate student perceptions with other key stakeholder perspectives and assessment artefacts, (ii) evaluate assessor calibration and variability across sites, (iii) examine and demonstrate the reliability and validity of the Clinical APEx, (iv) examine relationships between Clinical APEx outcomes and subsequent workplace performance, and (v) compare resource burden and educational impact against redesigned OSCE formats and programmatic assessment models. Future work should also deliberately sample and compare relevant subgroups to examine whether experiences differ by context or assessment outcome. Furthermore, multi-institutional implementations would clarify transferability and contextual dependencies.

Conclusion

This qualitative study demonstrates that while the Clinical APEx is institution-specific, it advances conceptual understanding of clinical assessment. By foregrounding authenticity, feedback, and psychological safety, the study illustrates how high-stakes exams can be reframed as opportunities for learning rather than solely judgment. These mechanisms are transferable across contexts and can inform innovations ranging from OSCE redesign to programmatic assessment strategies. Future work should examine how such mechanisms balance against resource demands, standardisation, and the need to assess clinical reasoning. In this way, the Clinical APEx is less a model to replicate than a lens through which to reconsider how summative assessments contribute to learners' development and professional identity.

Acknowledgement

We would like to acknowledge and thank Associate Professor Julia Harrison for her invaluable support in enhancing the visibility of our study and assisting with the recruitment of medical students. We also extend our sincere gratitude to the 2024 final-year medical students at Monash University for their generous participation and contributions to this research. This research was supported by the Commonwealth through an Australian Government Research Training Program Scholarship [DOI: https://doi.org/10.82133/C42F-K220].

Authors' contribution

All authors contributed significantly to the work presented in this paper. MNH, AK and DI conceptualized the study. MNH conducted the semi-structured interviews. MNH and WPY conducted the coding and thematic analysis. MNH and DI were responsible for drafting the initial manuscript and coordinating revisions. All authors (MNH, WPY, AK, PB, NK, ML and DI) participated in the interpretation of the results, reviewed and approved the final version of the manuscript, and agree to be accountable for all aspects of the work.

Conflict of interests

There are no relevant financial or non-financial competing interests to report.

Declaration of AI use

The authors declare that no AI tools were used in the preparation of this manuscript.

References

1. Harden RM, Stevenson M, Downie WW, Wilson GM. Assessment of clinical competence using objective structured examination. BMJ. 1975;1(5955):447–51.
2. Sloan DA, Donnelly MB, Schwartz RW, Strodel EW. The Objective Structured Clinical Examination The New Gold Standard for Evaluating Postgraduate Clinical Performance. Ann Surg. 1995;222(6):735–42.
3. Newble D. Techniques for measuring clinical competence: objective structured clinical examinations. Med Educ. 2004;38(2):199–203.
4. Gulikers JTM, Bastiaens TJ, Kirschner PA. A five-dimensional framework for authentic assessment. Educ Technol Res Dev. 2004;52(3):67–86.
5. Brand HS, Schoonheim-Klein M. Is the OSCE more stressful? Examination anxiety and its consequences in different assessment methods in dental education. Eur J Dent Educ. 2009;13(3):147–53.
6. Azim Majumder A, Kumar A, Krishnamurthy K, Ojeh N, Adams OP, Sa B. An evaluative study of objective structured clinical examination (OSCE): students and examiners perspectives. Adv Med Educ Pract. 2019;10:387–97.
7. Schuwirth LWT, Van Der Vleuten CPM. Programmatic assessment: From assessment of learning to assessment for learning. Med Teach. 2011;33(6):478–85.
8. Watling CJ, Lingard L. Toward meaningful evaluation of medical trainees: the influence of participants' perceptions of the process. Adv Health Sci Educ. 2012;17(2):183–94.
9. Malau-Aduli BS, Jones K, Saad S, Richmond C. Has the OSCE Met Its Final Demise? Rebalancing Clinical Assessment Approaches in the Peri-Pandemic World. Front Med. 2022;9:825502.
10. Khan H. OSCEs are outdated: clinical skills assessment should be centred around workplace-based assessments (WPBAS) to put the 'art' back into medicine. MedEdPublish. 2017;6:189.
11. Giri J, Stewart C. Innovations in assessment in health professions education during the COVID-19 pandemic: A scoping review. Clin Teach. 2023;20(5):e13634.
12. Kumar A, Sarkar M, Fullerton P, Vickers J, Barton P. Perceptions of the usefulness of an online simulated clinical examination. Int J Med Educ. 2025;16:45–51.
13. ten Cate O. Competency-Based Postgraduate Medical Education: Past, Present and Future. GMS J Med Educ. 2017;34(5):Doc69.
14. Harris P, Snell L, Talbot M, Harden RM. Competency-based medical education: implications for undergraduate programs. Med Teach. 2010;32(8):646–50.
15. Schuwirth L, Ash J. Assessing tomorrow's learners: In competency-based education only a radically different holistic method of assessment will work. Six things we could forget. Med Teach. 2013;35(7):555–9.
16. Lurie SJ. History and practice of competency-based assessment. Med Educ. 2012;46(1):49–57.
17. Lockyer J, Carraccio C, Chan MK, Hart D, Smee S, Touchie C, et al. Core principles of assessment in competency-based medical education. Med Teach. 2017;39(6):609–16.
18. Hawkins RE, Welcher CM, Holmboe ES, Kirk LM, Norcini JJ, Simons KB, et al. Implementation of competency-based medical education: are we addressing the concerns and challenges? Med Educ. 2015;49(11):1086–102.
19. Khalafi A, Abbasi A, Sarvi Sarmeydani N, Albooghobeish M. Investigating the Effectiveness of Formative OSCE Combined with Visual Feedback in Improving Clinical Competence among Iranian Nurse Anesthesia Students: A Quasi-experimental study. J Adv Med Educ Prof. 2024;12(4):251–60.
20. Riaz Q, Khan M, Masoo S. Evaluating the Clinical Learning Environment for Competency-based Postgraduate Education in a Low-Middle Income Country: Trainee Perceptions using PHEEM Inventory. J Adv Med Educ Prof. 2025;13(4):303-10.
21. Edmondson A. Psychological Safety and Learning Behavior in Work Teams. Adm Sci Q. 1999;44(2):350–83.
22. Baimai S, Vanicharoenchai V, Iramaneerat C. Bridging Simulation and Practice in Medical History Taking: A Comprehensive Needs Assessment of Standardized Patient Competencies in Early Clinical Exposure. J Adv Med Educ Prof. 2025;13(3):206-17.
23. Gupta SK, Srivastava T. Assessment in Undergraduate Competency-Based Medical Education: A Systematic Review. Cureus. 2024;16(4):e58073.
24. Prediger S, Schick K, Fincke F, Fürstenberg S, Oubaid V, Kadmon M, et al. Validation of a competence-based assessment of medical students' performance in the physician's role. BMC Med Educ. 2020;20(1):6.
25. Scott S, Palincsar A. Sociocultural Theory [Internet]. The historical roots of sociocultural theory. 2025 [Cited 2025 Apr 15]. Available from: https://dr-hatfield.com/theorists/resources/sociocultural_theory.pdf.
26. Scott S, Palincsar A. Sociocultural theory [Internet]. 2013 [Cited 2013 4 May]. Available from: http://www.education.com/reference/article/sociocultural-theory/.
27. Vygotsky LS. Mind in society. Cambridge, MA: Harvard University Press; 1978.
28. Campbell C. Creating a Successful Implementation of PebblePad: The University Context. In: Allan CN, Campbell C, Crough J, editors. Blended Learning Designs in STEM Higher Education [Internet]. Singapore: Springer Singapore; 2019 [Updated 2025 Nov 8]. p. 17–34. Available from: http://link.springer.com/10.1007/978-981-13-6982-7_2.
29. Altahawi F, Sisk B, Poloskey S, Hicks C, Dannefer EF. Student perspectives on assessment: Experience in a competency-based portfolio system. Med Teach. 2012;34(3):221–5.
30. Cilliers FJ, Schuwirth LW, Adendorff HJ, Herman N, Van Der Vleuten CP. The mechanism of impact of summative assessment on medical students' learning. Adv Health Sci Educ. 2010;15(5):695–715.
31. Monrouxe LV, Bullock A, Gormley G, Kaufhold K, Kelly N, Roberts CE, et al. New graduate doctors' preparedness

for practice: a multistakeholder, multicentre narrative study. BMJ Open. 2018;8(8):e023146.
32. Berger R. Now I see it, now I don't: researcher's position and reflexivity in qualitative research. Qual Res. 2015;15(2):219–34.
33. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77–101.
34. Schuwirth LWT, Van Der Vleuten CPM. The use of clinical simulations in assessment. Med Educ. 2003;37:65–71.
35. Govaerts MJB, Van Der Vleuten CPM, Holmboe ES. Managing tensions in assessment: moving beyond either–or thinking. Med Educ. 2019;53(1):64–75.
36. Norcini JJ, Blank LL, Duffy FD, Fortna GS. The Mini-CEX: A Method for Assessing Clinical Skills. Ann Intern Med. 2003;138(6):476–81.
37. Norcini J, Burch V. Workplace-based assessment as an educational tool: AMEE Guide No. 31. Med Teach. 2007;29(9–10):855–71.
38. Van Der Vleuten CPM, Schuwirth LWT, Driessen EW, Dijkstra J, Tigelaar D, Baartman LKJ, et al. A model for programmatic assessment fit for purpose. Med Teach. 2012;34(3):205–14.
39. Donnon T, Al Ansari A, Al Alawi S, Violato C. The Reliability, Validity, and Feasibility of Multisource Feedback Physician Assessment: A Systematic Review. Acad Med. 2014;89(3):511–6.
40. Van Der Vleuten CPM, Schuwirth LWT. Assessing professional competence: from methods to programmes. Med Educ. 2005;39(3):309–17.
41. Nasca TJ, Philibert I, Brigham T, Flynn TC. The Next GME Accreditation System — Rationale and Benefits. N Engl J Med. 2012;366(11):1051–6.
42. McLachlan JC. The relationship between assessment and learning. Med Educ. 2006;40(8):716–7.
43. Harden RM, Gleeson FA. Assessment of clinical competence using an objective structured clinical examination (OSCE). Med Educ. 1979;13(1):41–54.
44. Hattie J, Timperley H. The Power of Feedback. Rev Educ Res. 2007;77(1):81–112.
45. Shute VJ. Focus on Formative Feedback. Rev Educ Res. 2008;78(1):153–89.
46. Burgess A, Van Diggele C, Roberts C, Mellis C. Feedback in the clinical setting. BMC Med Educ. 2020;20(S2):460.
47. Boud D, Molloy E, editors. Feedback in Higher and Professional Education: Understanding it and doing it well [Internet]. 2012 [cited 2025 Apr 21]. Available from: https://www.taylorfrancis.com/books/9781135107475.
48. Kassab SE, Rathan R, Taylor DCM, Hamdy H. The impact of the educational environment on student engagement and academic performance in health professions education. BMC Med Educ. 2024;24(1):1278.
49. Wass V, Van Der Vleuten C, Shatzer J, Jones R. Assessment of clinical competence. The Lancet. 2001;357(9260):945–9.