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The Journeys of Three ASPIRE-winning Medical Schools toward Excellence in Student Assessment

Running Head: **Journeys of Three Medical Schools, Assessment**

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ABSTRACT

Introduction: ASPIRE Excellence Awards in Student Assessment are offered to medical schools with innovative and comprehensive assessment programmes adjudged by international peers, using evidence-based criteria.

The journeys of three ASPIRE-winning medical schools towards 'assessment-excellence' are presented. These schools include Aga Khan University Medical College, Pakistan, Southern Illinois University School of Medicine, USA, and University of Leeds School of Medicine, UK.

Methods: The unfolding journeys highlighting achievements, innovations and essential components of each assessment programme were compared to identify differences and commonalities.

Results: Cultural contextual differences included developed-versus-developing country, east-west, type of regulatory bodies and institutional-versus-national certifying/licensing examinations; which influence curricula and assessments.

Twelve essential commonalities were found: alignment with institutional vision, sustained assessment leadership; stakeholder-engagement; communication between curriculum and assessment; assessment-for-learning and feedback; longitudinal student profiling of outcome-achievement; assessment rigour and robustness; 360^{o} feedback

from-and-to assessment; continuous enrichment through rigourous quality assurance; societal sensitivity; influencing others; a ‘wow’ factor.’

Conclusion: Although the journeys of the three medical schools were undertaken in different cultural contexts, similar core components highlight strong foundations in student assessment. The journeys continue as assessment programmes remain dynamic and measurement science expands.

This article may be helpful to other institutions pursuing excellence in assessment.

INTRODUCTION

Assessment of medical student progress is a complex and vital responsibility. Excellence implies that a program of assessment actively promotes learning to achieve curricular objectives and outcomes, guarantees unbiased assessment of student progress, and protects patient safety by ensuring that only students who meet competency standards progress and graduate. The aim of the Aspire-to-Excellence Awards, a flagship initiative of the Association of Medical Education in Europe, is to recognize outstanding performance and promote educational excellence in six areas: Student Assessment, Student engagement in the curriculum, Social accountability, Faculty development, Simulation and Curriculum Development. The Aspire-to-Excellence criteria for each represent best practices (aspire-to-excellence.org), and the applications are peer-reviewed by a panel of international medical educators.

In this paper, the journeys of three medical schools towards comprehensive assessment excellence are reported. Each received the ASPIRE Award for Excellence

in Student Assessment: Aga Khan University Medical College (AKU-MC), Pakistan, Southern Illinois University School of Medicine (SIUSOM), USA, and University of Leeds School of Medicine, UK. Each operates through different cultures, policies, and environments, which may influence medical school curricula and assessment systems.

Since this article was prepared, Sydney Medical School, Australia, has also won the ASPIRE award for assessment excellence, making a total of four schools on four different continents with this award.

The journeys detailed here provide a platform to highlight commonalities among the schools despite the contextual differences.

AGA KHAN UNIVERSITY MEDICAL COLLEGE: OUR JOURNEY

Aga Khan University (AKU), chartered in 1983, is Pakistan's first private university. It is not-for-profit and has campuses in Pakistan, South-Central Asia, East Africa and the United Kingdom. Its vision is to be an autonomous international institution of distinction, primarily serving the developing world and Muslim societies in innovative, enduring ways. Its mission includes capacity development for exemplary leadership and shaping public policies through international standards, local relevance, access and impact. The medical college offers a five-year undergraduate programme. Its assessment programme starts with Assessment-for-Diversity. This admission test is held in seven cities and ensures equal-opportunity student-access to medical school. The Admission Committee's representation (regulatory bodies, alumni, public, faculty from AKU and other academic institutions) ensures relevance, authenticity and transparency.

Previous Associate Deans, Education, CWVellani and JTalati, defined curricular outcomes and established the Department for Educational Development (DED) for health professions education (HPE), which include the Examination Section and Standardised Patient Bank. RWZuberi, third Associate Dean, Education, led a curricular renewal, established a centralized question-bank, initiated a Master's degree in HPE (with its assessment course offered as a stand-alone-course as well), and invested in DED faculty by building assessment expertise through doctoral qualifications in HPE. Prior to that time there were few MHPEs and no PhDs in Medical Education in Pakistan.

The Associate Deans, Education,have strong relationships with the Dean, Curriculum Committee, and the Examination and Promotions (E&P) Committee. DED has representation on all educational committees. However, the Examination Section reports only to DED: assessment talks to the curriculum but does not report to it.

The Assessment Programme was transformed during Curricular Renewal (2002). Its curricular outcomes are aligned to international standards and for local relevance (Table 1). Examination blueprints are based on exit level and enabling objectives derived from a faculty-identified AKU List of Common Clinical and Health Problems, cross-checked against national data (NIPS-1986).

Integrated spirals of assessment, aligned to spiral longitudinal curricular themes (Davis et al. 2007), ensure all outcomes are assessed throughout the curriculum. Within each spiral, multi-trait, multi-method assessments are matched to enabling course/year objectives, and targeted towards increasing levels of complexity for student progression.

National regulatory bodies require individual subject scores, and viva-voce examinations with external examiners. To maintain the ethos of integrated assessments, horizontally-integrated, scenario-based written examination questions are jointly owned by relevant disciplines, and an innovative multi-station, case-based standardised viva-voce basic sciences examination was introduced. Discipline-based results are then extracted for regulatory requirements.

Clinical skills assessments start in Year 1 and basic science assessments continue until Year 5. In years 1-2, basic sciences are learned and assessed through clinical vignettes (Zuberi 2011); in Years 3-5, 15% of questions in written examinations assess basic sciences. Regulatory requirements for external examiners are linked to longitudinal integrated assessment by inviting basic science external examiners for clinical viva-voce examinations.

Examination frequency was reduced, true/false questions were replaced by one-best-answer formats, and objective structured clinical examinations were introduced as end-of-clerkship examinations, using simulations as needed. The AKU Student Continuous Assessment Form (SCAF) assesses all outcomes with an emphasis on professionalism and ethics. This form was standardized across all clerkships to track longitudinal student progress.

Formative examinations were mandated before summative (written or clinical), and mid-module/clerkship scores are used solely to promote learning (Zehra & Sadaf 2012). Face-to-face immediate feedback is provided at each station during the Year1 formative OSCE. After written assessments in years 1-2, anonymous individualised feedback-

153 graphs are provided to students portraying achievement of objectives. Elsewhere
154 feedback is provided via the Learning Management System.

155 To build teams and decrease competition, grades were changed to Honours/Pass/Fail.
156 Student voices on the Curriculum Committee overcame faculty resistance to this
157 change.

158 Both unsuccessful and borderline successful students are counseled; the former are
159 also provided guided remediation before re-examinations. All assessment policies are
160 provided to students and are on the AKU-intranet.

161 Q-Bank re-vitalisation is ensured through item development and multidisciplinary
162 reviews (Sadaf et al. 2012). Pre-hoc and post-hoc reviews (Yousuf et al. 2015) ensure
163 congruence with examination blueprints, fit-for-purpose assessments, appropriate test
164 difficulty, fairness and robustness (Streiner et al. 2014; Naeem et al. 2012).

165 AKU-MC invites external examiners to its Annual Mega-Retreats for Item Review,
166 whereby they contribute authenticity to the examination, but also take back what they
167 learn to improve assessments at their own institutions.

168 Results are approved by an independent E&P Committee, which has student-elected
169 student members. Multi-modal multiple assessments of each outcome by multiple
170 assessors (internal and external) across the curriculum provide multiple sources of
171 defensible validity evidence for outcome achievement, progression and certification.

172 The assessment loop is closed by using student performance-analyses to inform
173 students regarding their achievements; faculty regarding teaching and item

effectiveness; the curriculum regarding areas and outcomes that need attention; and academic leaders that AKU-MC produces fit-for-purpose doctors.

Feedback regarding assessments obtained from students, faculty members, internal and external examiners, feeds into on-going monitoring and continuous-assessment-and-curricular-renewal (catalytic effect), achieved through layers of internal and external programme reviews (Figure 1).

As a ripple effect, AKU residency and Nursing-and-Midwifery programmes in Pakistan and East Africa adopted the question-development-and-review sessions. Nationally, true/false MCQs attained obsolescence, and admission tests became the norm. Regionally, AKU conducts assessment video-linked workshops for the French Medical Institute for Children, Afghanistan. Both pre-and-post Aspire-Award, national and regional medical colleges have regularly requested AKU-MC for formal orientation to their assessment systems. The belief emerged that AKU-faculty were not just cutting stone, they were building a cathedral (Feiner 2004).

An ‘assessment culture’ is nurtured by offering multiple capacity-building pathways for medical education expertise as follows. Level-1 Mandatory Introductory Short Course-HPE: Faculty are introduced to outcome-based assessment, assessment-for-learning and item-development. Level-2: Standard-setting, pre-and-post-hoc sessions provide on-the-job learning, reinforcement, camaraderie and fun. Level-3: Faculty may then pursue additional assessment courses and/or MHPE qualifications. Fifty faculty have done this so far, resulting in several publications on assessment (Bari 2010; Afzal et al. 2010; Nadeem et al. 2012; Qureshi and Ali 2013).

The “Wow Factor” of innovative assessments in order to keep the ethos of an integrated curriculum to satisfy traditional regulatory requirements, while maintaining multi-trait, multi-method, robust and authentic spiral assessments of all outcomes, with rigorous QA processes, led to a huge national ripple effect. Faculty engagement and empowerment are the chief ingredients of the AKU-recipe.

SOUTHERN ILLINOIS UNIVERSITY SCHOOL OF MEDICINE: OUR JOURNEY

Southern Illinois University School of Medicine (SIUSOM) was born in the spirit of innovation. In 1968, the Illinois Board of Higher Education recommended that SIU create a medical school in downstate Illinois to serve the people of central and southern Illinois, and in 1970, SIUSOM named Richard H. Moy, MD, as its inaugural Dean. SIUSOM was the first medical school to establish a complete set of goals and objectives for the medical degree (Curricular Objectives 1976). In 1981, Harold Barrows, MD, was recruited to implement a standardized patient curriculum. The advent of this clinical, simulation-based curriculum paved the way for Reed Williams, PhD, another pioneer in medical education, to develop a rigorous method of assessing medical students in the context of standardized patient encounters (William et al. 1987). He, along with Barrows and other colleagues, developed the first comprehensive clinical performance examination for senior medical students based on standardized patient technology. This method of assessment has since been adopted world-wide. In 1985, SIUSOM added a graduation requirement that all students satisfactorily complete this comprehensive performance-based assessment using standardized patients; it became known as the Senior Clinical Competency Examination (SCCX) (Williams et al. 1987). In

2004, Debra Klamen, MD, MHPE, was recruited to SIUSOM as the Associate Dean for Education and Curriculum and Professor and Chair of the Department of Medical Education in an effort to bring further innovations to the medical school. In 2005, she and colleagues developed and initiated a Longitudinal Performance Examination (LPE), aimed at assessing the clinical reasoning of medical students and monitoring its growth over the course of medical school training (Williams et al. 2008). Research by Klamen and Williams led to the development and validation of a diagnostic justification (DXJ) narrative, which was added to the SCCX examination (Williams et al. 2011, Williams and Klamen 2012). The DXJ allowed for a more complete assessment of medical students' ability to organize and use their medical knowledge to guide diagnostic decision-making and defend their diagnosis and clinical thought process. It allows medical educators to identify critical deficiencies in diagnostic reasoning that previously remained undiscovered (Klamen and Williams 2010).

SIUSOM continues to use the standardized patient curriculum in all years of medical training to augment clinical education and assessment. In 2014, with support from the Josiah Macy, Jr. Foundation, SIUSOM began the process of revamping clinical clerkships, with the blessing of the Liaison Committee for Medical Education (the accrediting body for North American medical schools). The driver for change was that years of LPE data from multiple schools revealed students' clinical reasoning was paradoxically plateauing during the clinical years. These assessment tools have not only helped guide improvements to the curriculum, but have helped SIUSOM stay on the forefront of medical education. In recognition for these efforts and commitment to

assessment and assessment innovation, SIUSOM was awarded the ASPIRE Award for Excellence in Assessment.

As part of the Year 3 clinical curriculum reform mentioned previously, lectures and end-of-rotation, multiple choice format exams have been eliminated. The extent of innovation and departure from the traditional third year clerkships provided an organizational challenge, but SIU faculty, at heart, are educational change agents themselves. Student assessment is based primarily on narrative feedback from preceptors with whom they have a longitudinal relationship. SIUSOM developed an On-the-Fly assessment tool that is designed to be completed on a mobile device (e.g. cell phone or tablet). The On-the-Fly form allows preceptors to provide students with specific feedback in real-time.

With the intention of providing additional support to medical students, SIUSOM hired eight nurse educators in 2000 who work to coordinate student experiences, and to teach, supervise, and assess medical students. Utilizing the skills of nurse educators, fourth-year medical students entering a surgical specialty have the option to enroll in a Surgical Residency Readiness elective. This elective includes a Mock Page Simulation Program that was developed at SIUSOM and has since been incorporated into the National Curriculum of Resident Preparatory electives (2011). Mock pages are an opportunity to assess medical students' clinical decision-making and interprofessional communication while simultaneously practicing skills that are invaluable as a resident (Boehler et al. 2017; Schwind et al. 2011; and Schwind et al. 2011).

At SIU, the Department of Medical Education (DME) is closely tied to the student body. This creates a culture in which students feel invested in their own medical education. This relationship led to the creation of a Medical Education special interest group for students and to the development of a student-led program evaluation effort that is assessing the effectiveness of the recent clerkship curriculum reform. Student program evaluators are learning to assess curriculum experiences via qualitative data inquiry and analysis.

While clinical reasoning and performance assessment, as well as extensive student engagement, provide the WOW factor at SIU, a comprehensive assessment program examining all graduation objectives is in place as well. Students, beginning in their first year of medical school, are assessed using multiple choice questions, standardized patients and OSCEs, peer and tutor evaluations (from work in problem-based learning groups), and physician-mentor observation and feedback. Faculty are provided extensive development opportunities through the Academy for Scholarship in Learning. A student progress committee (one for each year of medical school) is charged with ensuring the reliability and validity of all examinations. Research in medical education is a strength as well, with over 100 articles about assessment having been written to date. The effect of receiving an APIRE award was very significant (Cianciolo et al, 2017).

University of Leeds, School of Medicine: Our Journey

The School of Medicine at the University of Leeds was established in 1831 and is recognized as an international centre for teaching and research excellence in medical education. The School's aim is to translate research into healthcare practice, to

educate future scientific and clinical leaders and to narrow health inequalities, locally and globally. The University of Leeds Medical degree (MBChB) is a 5 year undergraduate programme which utilises a range of evidence-based approaches to learning and teaching including self, group and technology-enhanced learning methods. High levels of integration and case-based learning, using a spiral and iterative approach to the curriculum, enable students to assimilate their learning effectively throughout the programme. The MBChB programme incorporates vertical strands which run through the curriculum encompassing Innovation, Development, Enterprise, Leadership and Safety (IDEALS). In addition, the Campus to Clinic vertical strand, based almost entirely in the workplace, develops clinical skills, awareness of patient safety measures, professionalism and clinical decision-making. Distinctiveness is demonstrated through our educational philosophy, core values, and innovative delivery and assessment of the curriculum.

The school's principle objective is to provide doctors prepared for medicine in the twenty-first century, based on standards described for the UK in the General Medical Council's strategy 'Tomorrow's Doctors.' As a consequence, assessment is at the heart of the curriculum with the philosophy 'less-is-better' at the core. The amount of graded summative assessments have been reduced and the number of formative assessments for learning (AFL), with a focus on rich, detailed feedback, have been increased. Post-Aspire award the development of AFL has been a key component of programmatic assessment whereby formative, continuous assessment is designed to maximize student development and promote and encourage continuous learning, self-reflection and personal development. These are skills that are essential within the dynamic

profession of medicine. A key component of this is the use and development of workplace based assessments (WBA) within the MBChB mobile curriculum (Fuller and Joynes, 2014). This is particularly important as feedback continues to remain an area of challenge in academic study. As part of a faculty-wide initiative of 'focus on feedback' (FOF), the medical school is striving to develop assessments that generate, and have impact on, quality feedback. This initiative has impacted all areas of assessment and there is a drive towards personalized assessment and feedback for learners. Post-Aspire, University of Leeds School of Medicine has revised and improved the feedback students receive, particularly in the OSCEs and WBAs. The school has moved away from quantifying performance feedback and focused on personalized, actionable narratives. The structure of the feedback forms were produced using a co-design approach with staff and students, as well as the careful consideration of cognitive load principles.

High stakes summative examinations continue to be a measure of progression; it is therefore essential to ensure that they are authentic and of extremely high quality. In-house research has looked into this extensively pre- and post-ASPIRE award, particularly in improving standards in knowledge examinations. An example of this is the use of Rasch methodology (Homer et al. 2012). Ensuring that assessments are authentic is highlighted within OSCEs by the inclusion of children as simulated patients during paediatric assessments (Darling and Bardgett 2013).The streamlining of the assessment model, and reduction of summative assessments, is evidenced in the move to a sequential testing model for clinical performance and knowledge assessments (Pell et al. 2013). The delivery of such high stakes testing ensures rigor, fairness and

reliability; this is essential in the identification and decision-making in respect to students in the critical pass/ fail region. The move to a sequential testing format sought to address such issues by using a sound theoretical approach, which allowed for an altered test format to be used across a range of domains, carefully implemented into the curriculum. This approach has led to the development of detailed quality metrics that have informed curriculum delivery and assessment models (Pell et al. 2010).

In terms of innovation, evaluation, and scholarly activity there is a long-standing programme of continuous improvement to assessments based on current literature and the medical school's research. Over the last decade, our international reputation in this area has grown. Ensuring that programmatic assessment is fair, defensible, and authentic and involves a careful selection of assessment formats that align to learning and curriculum outcomes is paramount. The core principles of continued quality improvement and outcome-based learning are essential as we continue to adopt research-led assessment strategies and development. This has progressed to involve continued longitudinal student profiling, development and review of assessment metrics and improvement in the quality of assessments (Homer and Darling 2016; Homer et al. 2017). This research has focused on a wide range of issues, such as standard setting, managing assessor judgements (Fuller et al. 2016) and the disparity between OSCE checklists and global grades (Pell et al. 2015).

At Leeds, there is a focus on innovation in assessment practice in the pursuit of excellence, as demonstrated by implementing innovative assessment processes. The school is responsive to societal needs, both locally and globally, and rigorous assessment ensures that only those who reach academic and professional standards

graduate. Secondary to this, employers, students and stakeholders recognize success in assessment as a signal for career readiness. Leed's processes are refined and cost effective, the data are clear, there is evidenced utility and transparent purpose that is continuously evolving. The involvement, and continuous communication, of a wide range of stakeholders (including the National Health Service, employers, local placement providers and external examiners) in curriculum and assessment development is an extremely strong and important feature of the assessment strategy. Research-directed assessment strategies are developed iteratively and are based on both world-leading external scholarship and internationally recognized in-house empirical research which provides the WOW factor in assessment at Leeds.

Methods: Steps of Comparison

The three medical schools wrote their own independent journeys and identified the highlights of their journeys.

The journeys were compared in three steps. 1. The cultural contexts, historical development of assessment excellence, assessment practices and their rigour, and the highlights of the journeys were compared. 2. Evidence-based concepts and themes of good assessment common to all three were extracted. 3. Some concepts common to all three medical schools, but not found in literature, were also highlighted.

Based on these comparisons, the key cultural contextual differences and the common key essential elements were identified and are given below. The key commonalities in

the three journeys formed the basis of constructing a profile of a medical school with assessment excellence.

Results:

Each of the unfolding journeys had their own frameworks and attained the key elements of the common framework in their own sequence and in their own time-frames.

Key Contextual Differences:

Four main contextual differences were identified (Table 2). Pakistan is an eastern developing country, with a traditional national regulatory body, and university certifying examinations; USA is a western developed country, with progressive national regulatory bodies and national certifying and licensing examinations; while the UK is a western developed country, with progressive regulatory bodies, but has institutional certifying examinations.

Key Commonalities:

Twelve essential concepts of good assessment were found to be common to all three journeys (Table 3): alignment with institutional vision, sustained assessment leadership; stakeholder-engagement; communication between curriculum and assessment; assessment-for-learning and feedback; longitudinal student profiling of outcome-achievement; assessment rigour and robustness; 360^{o} feedback from-and-to assessment; continuous enrichment through rigourous quality assurance; societal sensitivity; influencing others; and a specific-to-institution 'wow' factor.'

Conclusion:

These journeys show there are no short-cuts to assessment excellence. Each medical school is from a different continent, operates through different contexts, and pursued different pathways in its journey. Yet, each school also pursued on-going iterative self-improvement cycle based on vision, innovations, evidence-based robust and authentic assessment, meticulous attention to quality and wide stakeholder engagement.

These commonalities found in the three schools showcase essential themes for assessment excellence. While many commonalities have previously been discussed in the literature, three elements integral to all three journeys are not clearly mentioned there: (1) longitudinal assessment leadership; (2) high level assessment expertise; and (3) high levels of communication between curriculum and assessment. In addition, each had evidence of 'more' than the required Aspire criteria.

Their journeys continue as curricula and assessment systems remain dynamic and measurement science expands.

Profile of a Medical School with Excellence in Student Assessment

(Based on the Commonalities found in the Three Schools)

1. The medical college curriculum, including its assessment programme, must be aligned to the school's mission and vision (Henning GW).

2. There must be continued committed leadership and expertise in assessment within a strong department of medical education. This ensures innovation, research and faculty support.

3. There must be transparent and fair policies, with stakeholder engagement in assessment to ensure a common understanding of what is done and why (van der Vleuten et al. 2015).

4. There must be evidence of synchrony between those who set assessment programmes and those who run the curriculum, ensuring defined roles and clear communications.

5. There must be plentiful opportunities for deliberate practice, formative assessments with personalized high quality constructive feedback that promotes student reflection and learning (preferably using adaptive technology), and opportunities for remediation before re-assessment (van der Vleuten et al. 2015).

6. Also essential is the longitudinal profiling of student engagement and performance via spiral iterative assessments of all outcomes, identifying students and curricular areas that require remediation or modification, respectively (van der Vleuten et al. 2015).

7. Assessments must provide fair, objective, standardized, multiple, authentic and longitudinal evidence of progressive complexity to ensure defensibility of validity decisions (van der Vleuten et al. 2015).

8. Assessment must not only provide feedback to students, teachers, assessors and the curriculum – the catalytic effect (Norcini et al. 2011), but also to those who set assessments and the leadership. Assessment programs must be responsive to feedback from students, faculty members, examiners and patients to ensure continuous improvement.

9. There must be evidence of continuous monitoring and enrichment through rigorous and iterative quality assurance processes.

10. There must be sensitivity and flexibility in curricula and assessments to meet changing societal and global needs and new emerging themes, to ensure that an exceptional school continues to grow (Boelen and Woollard 2010).

11. The medical school must demonstrate a ripple effect as its in-house innovations are adopted in other programmes, nationally and/or internationally.

12. There must be a 'Wow Factor' of cutting-edge assessment practices including assessment innovations, and innovative problem-solving, and/or use of technology. In-house assessment research must be relevant locally and internationally.

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551

552 **Table 1.**

553 **Medical Education Outcomes: International, National (PM&DC) and Institutional (AKU-MC**

554

IIME 7 Minimum Requirements	9 Abilities	Outcomes (Dundee)	PM&DC: 7 Star Doctor Proposed	AKU UGME Outcomes / Attributes
1. Professionalism (Self directed life long learner, Ethical, Collaborator)	5,6 & 8	9, 11 role of doctors, personal development	V Professional & Role model	Continuous learners, direct & evaluate this activity. Work effectively with colleagues, health teams Ethically and culturally sensitive
2. Scientific Knowledge	3 & 4	3Investigations 4 Management 8 Scientific, 10 decision making	II Knowledge-able	Gather, understand & evaluate new knowledge, apply it to health &disease problems --- in the future.
3. Communication Skills	1	6	V Role model Professional	Communicate effectively
4. Clinical Skills	2	1+ Procedures	I Skillful	Competence in community-based primary clinical care; supervised for hospital care
5. Population Health	7	5	III Community health promoter	Primary health care; community based maternal & child care.
6. Information management		7	V Role model Professional	Practice evidence-based medicine, using scientific evidence;
7. Critical Thinkers	9		IV Critical thinker	Reason critically, make justifiable decisions;
			VI Researcher	Scientific curiosity, .towards research
			VII Leader	Leadership in societal issues

562 9 Abilities (Smith 1999).

563 Dundee Outcomes (Harden et al. 1999).

564 PM&DC: Pakistan Medical and Dental Council (Revised Curriculum HEC 2010-2011)

565

Table 2. Contextual Differences in the Three Medical Schools awarded the Aspire-to-Excellence Award in Student Assessment

S#	Contextual Differences	AKU-MC, Pak	SIU-SOM USA	U of Leeds SOM, UK
1.	**East-West**	East	West	West
2.	**Developed versus Developing Country**	Developing	Developed	Developed
3.	**Regulatory Bodies**	Traditional	Progressive	Progressive
4.	**Certifying and Licensing Examinations**	Institutional	National	Institutional

AKU-MC: Aga Khan University Medical College

SIUSOM: Southern Illinois University School of Medicine, United States of America

U of Leeds SOM: University of Leeds School of Medicine, United Kingdom

Table 3. Commonalities in the Journeys of Three Medical Schools awarded the Aspire-to-Excellence Award in Student Assessment

S#	Commonalities	AKU-MC, Pak	SIU-SOM USA	U of Leeds SOM, UK
1.	**Alignment with Institutional Vision**	√	√	√
2.	**Continuity in Assessment Expertise & Leadership**	√	√	√
3.	**Transparent Policies with Stakeholder buy-in**	√	√	√
4.	**Synchrony between Curriculum & Assessment Developers**	√	√	√
5.	**Deliberate Practice Assessment for Learning & Feedback**	√	√	√
6.	**Longitudinal Profiling of Student Achievement**	√	√	√
7.	**Multiple evidences of authenticity & reliability of examination scores to ensure defensibility of validity decisions**	√	√	√
8.	**360º Feedback from-and-to Assessment**	√	√	√
9.	**Rigorous Quality Assurance processes continuously improve & enrich assessment**	√	√	√
10.	**Sensitivity to societal needs**	√	√	√
11.	**Catalytic Effect**	√	√	√
12.	**The "Wow" Factor**	√	√	√

AKU-MC: Aga Khan University Medical College

SIUSOM: Southern Illinois University School of Medicine, United States of America

U of Leeds SOM: University of Leeds School of Medicine, United Kingdom

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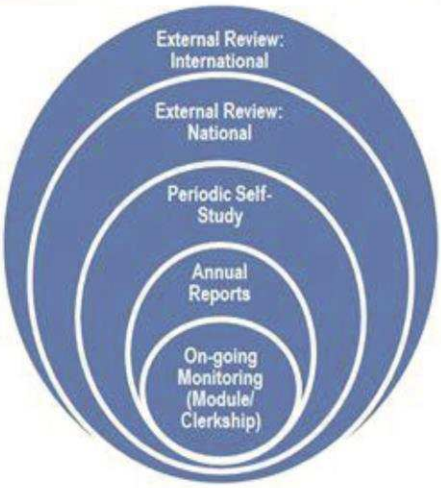
Figure 1. Internal and External Reviews



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