Integration of Standards of Accreditation Bodies as a Mean to Continuous Quality Improvement of Healthcare Education

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Abstract: ***Problem Background:*** Medical schools face external and internal challenges, of which is the condition required by the Educational Commission for Foreign Medical Graduates (ECFMG) of accepting foreign medical graduates from schools accredited by national accrediting bodies that use internationally equivalent standards; this condition would be valid by 2023. Hence graduates in the Middle East Region (MER) and Asia will not be certified by the ECFMG to attach to international training programs in the USA unless the accrediting bodies in MER and Asia are assessed against international standards. ***Research Objectives:*** 1.To assess the standards of various accreditation bodies as the National Commission for Academic Accreditation and Assessment (NCAAA) in KSA, National Authority for Quality Assurance and Accreditation of Education (NAQAAE) in Egypt and the Liaison Committee for Medical Education (LCME) in North America and Canada; 2.To benchmark the (NCAAA) standards against (LCME) and (NAQAAE) standards; 3.To set the outline for an eclectic set of standards categorized into key standardized and modifiable context-wise standards aiming at improvement of performance; 4.To form an audit manual which translates each standard to a set of items of minimal requirements and a set of best practice followed by detailed sound processes which guide institutions to standardized ideal performance. ***Methods:*** 1. Qualitative analysis and assessment of the NCAAA standards and matching them with the (LCME) and the (NAQAAE) ones: a. The areas and sub-areas are rated on a three-point scale; b. Holistic rating scale for assessing the NCAAA standards. 2. Reviewing the literature and asking medical education experts about best practices and concluding the items of best practice for each educational process enlightened by the standards. ***Conclusion & Recommendations:*** 1. The matched sets of standards almost have the same approach and scope whatever the roots from which they sprang; 2. Processes based on the set of ideal practice allowed the ceiling for quality improvement to be infinite and secured transferability and provoked the capability of dissemination of best practice; 3. Standardization of processes guarantees good outcomes; 4. Coordination of educational process operations is recommended to allow for a comprehensive robust evaluation system which could judge performance with high reliability. 5. Standards of any accrediting body should be enlightened by the social accountability principles.

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Key Words: Integration of standards, Accreditation, Continuous Quality Improvement, Healthcare education

1.Introduction:

Higher education institutions face various external and internal challenges as: Incredibility of national certificates and degrees abroad; Globalization and the threat of competition between national and international employment; International ranking of universities; Increasing environmental competitiveness in the higher education field in general, and in the medical education field in particular; Quality of graduates and their compatibility in the labor market; Increased demand on higher education in general, and on medical education in particular; and establishment of many private universities nationally and regionally in the Middle East and Asia.

Graduates from Middle East and Asian Medical Schools will face a problem by 2023, whereby the Educational Commission for Foreign Medical Graduates (ECFMG) announced that "the physician's medical school must be accredited through a formal process that uses criteria comparable to those established for U.S. medical schools by the Liaison Committee on Medical Education (LCME) or that uses other globally accepted criteria, such as those put forth by the World Federation for Medical Education (WFME)" (1). Hence graduates will not be certified by the ECFMG to attach to international training programs in the USA or Canada unless the corresponding national accrediting body is accredited internationally.

The National Authority for Quality Assurance and Accreditation of Education (NAQAAE) in Egypt and the National Commission for Academic Accreditation and Assessment (NCAAA) in KSA are developing bodies for assessment and accreditation of (HE) institutions and programs. Their standards and processes need to be assessed in order to render accreditation a mean to continuous quality improvement (CQI) rather than a goal in itself. Assessment of standards requires benchmarking against other well-established and working standards used by recognized accrediting bodies.

Moreover, although local accreditation is less expensive, serves a wider scope of institutions, and standards are appropriate to local conditions; yet its only drawback is its low credibility. Consequently, involvement of international accreditation bodies in the development of local standards therefore has a credibility value; in addition association with/recognition by an international accrediting body would also help establish this credibility (2).

In most reviewed literature, accreditation is usually conceptualized to measuring the institution performance as meeting the minimal standards for operation; whereas few authors suggest that accreditation measures institutions against the ideal achievable standard of quality (3 & 4). Moreover, accreditation is based on evaluations which measure inputs, processes and outputs. Sustainability of the outputs (results) has been strongly tied to effective quality management processes, whereby continuous processes of rigorous self assessment and enhancement based on reliable data take place (5). As a result, an accrediting body setting its standards must unfold each standard to clear measurable terms of good practice which must not be prescriptive; on the contrary, serve as a guide to innovation and (CQI), via continuous improvement of the customary processes in the institution (6). In addition, Viswanathan & Salmon (2000) stated that "The criticism of (TQM) systems is that they inhibit innovation and are limited to box-ticking as each indicator is met; (CQI), on the other hand, aims at both assuring quality and quality improvement."(7). Consequently, there has been an inclination in accreditation bodies to evolve their programs from (TQM) towards (CQI), whereas institutions are judged on their ability to surpass, not just meet, the required standards (8). **The questions are**: 1. How could accreditation standards measure quality of the outcomes (learning) besides the institutional setting?; 2. How could institutions continuously improve their quality of performance in terms of processes management?; 3. How could the current standards be revisited enlightened by global standards that secure social accountability and retention of good quality workforce?

Rational and Importance of the study:

This study aimed at: 1. reviewing (NAQAAE) and (NCAAA) standards since some sub-standards are generally stated, ambiguous, and difficult to measure. As a result it has been very difficult to deduce specific performance indicators from them. In addition, standards addressed the core standards which represent the minimal requirements without addressing the optimal and excellence standards which guide institutions to be in accordance with international best practices; 2. matching national standards with regional and international ones, will allow for equating the national provision of educational programs to international ones as well as equating national institutional and professional accreditation to international certification of accreditation; 3. facilitating the future establishment of a "Regional Accreditation Union in the Middle East and Gulf Region" adopting the same standards and allowing "Regional Credit Transfer" between higher education institutions in general and medical schools in particular; 4. at the institutional level, the study will lead to quality enhancement inextricably linked to quality assurance of the educational process by developing and institutionalizing quality improvement cycles of the institution educational operations and processes.

Objectives of the Study:

1. To assess the standards of (NAQAAE) and (NCAAA) in Egypt and KSA, respectively;
2. To benchmark the (NAQAAE) and (NCAAA) standards against (LCME) ones to spot areas which need further studies and consideration;
3. To set the outline for an eclectic set of standards categorized into key standardized and modifiable context-wise standards aiming at improvement of performance;
4. To form an audit manual which translates each standard to a set of items of minimal requirements and a set of best practice followed by detailed sound processes which guide institutions to ideal performance hence secure good outcomes.

2.Materials and Methods:

Type of Study according to (Fraenkel & Wallen, 2003) (9): Qualitative analysis and assessment of the NAQAAE and NCAAA and matching them with LCME standards.

1. Tools for data collection include the standards of the:
   - NAQAAE (http://www.naqaae.org) **(10):** standards are grouped under two main areas. They are prepared by international experts in quality assurance and accreditation of education, particularly from the Quality Assurance Agency (QAA) in the UK.
   - NCAAA **(http://www.ncaaa.org.sa) (11):** standards are compiled under five main areas. They are formulated by the collaboration of

experts from international accreditation organizations. They are used to accredit programs or institutions.

- LCME **(http://www.lcme.org) (12):** standards are included under five main areas. They are used to accredit medical schools in USA and Canada (professional accreditation).

2. The areas and sub-areas are rated on a three-point scale: "Match", "Match to some extent", and "Absent".
3. Holistic rating scale for assessing the standards addressing: coverage of main areas; clarity of standards statements; terms of good practice; and coverage of inputs, processes and outputs.

3. Results:

Regarding the aspects of the standards:

The standards of all three accrediting bodies covered almost all aspects of the institutional capacity and effectiveness of the educational process; yet NAQAAE is the only one that clearly defined: (1) Strategic Planning; (2) Ethics & Credibility; and (3) Postgraduate Studies. The three accrediting bodies did not demonstrate any standards concerning social accountability. **(Appendix- 1)**

Regarding the clarity of the standards & quality of good practice items:

NCAAA and LCME standards statements showed some ambiguity; whereby they do not constitute a clear guide to performance resulting in unsound processes and consequently undesired outcomes or even no outcomes. Consequently, some of the terms of good practice stated for each standard are hard to observe, measure or achieve. Overall the terms of good practice are non-prescriptive and allow space for addition and innovation **(Table –1).** Consequently, standards are first categorized to "Key" standards for which compliance must be (100%), and "Flexible" standards which could be achieved to an extent defined according to the contextual available resources and national policies and politics, i.e. standards under control of external effects **(Table-2)**.

Then each standard must be written in a format which consists of: (1) "Standard Statement" which must be comprehensive, inclusive, and clear; (2) "Minimal Requirements" which are mandatory; fixed at the time of evaluation; compliance for which must be 100%; and within the control of the institution; (3) "Excellence Requirements" which constitute best practice. They are changeable with time based on educational research and development; optional at a point of time; compliance to which is variable according to available resources and community as well as cultural needs. Such requirements must be written as item statements whereby each item is translated into a detailed ideal process. A sound process will guarantee a good outcome. **(Appendix- 2)**

Regarding the review process (Table- 1):

Although the methodology of the NCAAA for evaluation depends to a great extent on evaluating outcomes followed by processes, yet it still does not evaluate the learning achieved. On the other hand, LCME reviewers depend mainly on inputs and observe documents and listen to focus groups selected by the school to be accredited; then observe the presence of requirements in reality; however, they do not observe ongoing learning processes. As for NAQAAE, it stresses on all three aspects during the review process: inputs, processes and outcomes but still not the learning achieved.

Table- 1. Holistic Rating Scale for Assessment of NCAAA standards

Criterion	High (+++)	Medium (++)	Low (+)
1.Coverage of aspects	+++		
2.Clarity of standards statements		++	
3.Terms of good practice			
(3.a) Presence	+++		
(3.b) Observable		++	
(3.c) Measurable		++	
(3.d) Feasible		++	
(3.e) Non-prescriptive	+++		
4.Coverage of			
(4.a) Inputs			+
(4.b) Processes		++	
(4.c) Outcomes	+++		

Table- 2. Recommended Categorization of Standards

	Key Standards		Flexible Standards
1	Strategic Planning	**1**	Institutional Setting/Capacity
2	Educational Program & Academic Reference Standards	**1.1**	Governance & Organizational Structure
3	Teaching/Learning	**1.2**	Administrative Structure
4	Evaluation & Assessment	**1.3**	Resources (Financial/Physical)
5	Quality Management	**1.4**	Ethics & Credibility
6	Faculty	**1/5**	Community Engagement/Development
7	Social Accountability	**2**	Educational Effectiveness
		2.1	Students
		2.3	Research & Scholarly Activities
		2.4	Postgraduate Studies

4. Discussion:

Although local accreditation is less expensive, serves a wider scope of institutions, and the standards are appropriate to local conditions; yet its only drawback is its low credibility **(13 & 14)**. This is evidenced by the announcement of the Educational Commission for Foreign Medical Graduates in 2010 **(1).** Hence, support of national accreditation bodies by international agencies is crucial for the adaptation of established standards to local conditions; as well as achievement of international credibility of national accreditation bodies.

This study matched the regional standards of two regional accrediting body as NAQAAE in Egypt and NCAAA in KSA, and an international one as the LCME/CACMS in the United States and Canada. Results showed that the three accrediting bodies demonstrated aspects of institutional capacity to deliver educational services and effectiveness of such education, and showed congruence to some extent among them. However, NAQAAE is the only one that categorized those aspects clearly. **van Zanten et al. (2012) (15)** suggested that there should be *"a hierarchical structure of accreditation standards that needs to be acknowledged in the process of medical school review"*. NAQAAE standards clearly emphasized three key standards: (1) Strategic Planning standard as the first key standard that basically defines the acceptance for accreditation process by the accrediting body; (2) Educational Program and Academic Reference Standards based on community needs; and (3) Learning/ Teaching Processes and Resources standards. However, this is not clearly delineated in the NCAAA or LCME standards.

In addition, only NAQAAE demonstrated the "Ethics & Credibility" standard as part of the institution's capacity to manage the educational process. It is acknowledged to measure the practice of ethics and integrity and not only delivering them as topics or courses to undergraduate students as is the case in LCME standards.

"Postgraduate Studies" standard came in NAQAAE as part of the continuum of the academic environment, and emphasized its role in enhancing the quality of undergraduate students. Similarly is the case in LCME, but not in NCAAA. However, according to **van Zanten et al. (2012) (15)**, *"it appears that, at least from a global perspective, emphasis on research programs associated with medical schools may no longer be considered relevant today in ensuring the production of qualified graduates"*.

Although the LCME stressed upon the importance of the standards that acknowledge respect to diversity and students' rights; however, those standards are not mentioned in NAQAAE or the NCAAA. This might be attributed to the religious norms that normally exist in those societies and which encourage equity and justice among people despite their religion, race or culture. Consequently, it is essential that non-key standards be formulated as generic statements which allow flexibility and adaptation according to the context in which they are used; hence the weight of such generic standards could differ from one community to another.

Although the standards concerning "Faculty" are not classified as "Key" yet, in the viewpoint of the study group, a medical school having a state of the art educational program but teachers who are not proficient, definitely will not produce high quality graduates. This agrees with **(Darling-Hammond, 1999) (16).**

Hence it is recommended that there be "Key or Standardized Standards" as well as "Modifiable Standards" which could offer Higher Education Institutions flexibility in achieving them according to the context. Key standards that are to be standardized are: (1) Strategic Planning; (2) Educational Program & Academic Reference Standards; (3) Teaching/Learning; (4) Assessment/Evaluation of learning outcomes; (5) Quality Management; and (6) Faculty. **(Table- 2)**.

The three accrediting bodies included in the study did not tackle, either implicitly or explicitly, standards which govern "Social Accountability". Matching the standards, the "social engagement" standard came ambiguous and leaves the institution for its imagination in defining the nature and

weight of this engagement. Consequently, almost all institutions reductionize social engagement to the narrow scope of providing healthcare services. Again the quality of those services is left for institutions to define without emphasizing the quality, effectiveness, and relevance of those services to the communities that entrusted them to serve them. On the contrary, the remaining standards of the accrediting bodies revolve mainly on the educational program and came disconnected from the social needs and priorities as well as the demands of healthcare sector from the education sector. Consequently, each of the health and education sectors moves in parallel while they should be interdependent. This divergent state resulted in curricula which might be well designed but which produces graduates, who despite possessing the technical competencies; such competencies mismatch to patient and population needs, in addition to insufficient adaptation to local contexts "irrelevance". This resulted in either migration of graduates to other communities which fit with their competencies or become reluctant to serve resource-limited settings resulting in inequity. In conclusion, accreditation bodies should adapt their standards according to social accountability principles set by the WHO **(17).**

Concerning the terms of good practice, NCAAA and LCME standards statements showed some ambiguity. Consequently, some of the terms of good practice stated for each standard are hard to observe, measure or achieve. Overall the terms of good practice are non-prescriptive and allow space for addition and innovation. The LCME standards demonstrated ambiguities in the construction and meaning of standards as stated by **(18)**; which definitely leads to inattention of the surveyors to accreditation standards and which could be attributed to uncertainties about the meaning of the requirements and the quantities that need to be audited. The authors argued that many of the LCME standards which were not addressed clearly and hence surveyed with scant attention are important to the educational program development and quality control. On studying the LCME standards for 2010 in this study, it was found that they still need to consider more prominent definition and highlighting to standards which address quality assurance management and improvement to ensure quality improvement. Although the methodology of the NCAAA for evaluation depends to a great extent on evaluating outcomes followed by processes, yet it still does not evaluate the learning achieved. On the other hand, LCME reviewers depend mainly on inputs and observe documents and listen to focus groups selected by the school to be accredited; then observe the presence of requirements in reality; however, they do not observe ongoing learning processes. As for NAQAAE, it stresses on all three aspects during the review process: inputs, processes and outcomes but still not the learning achieved. It could be concluded that all three accrediting bodies accredit programs of study and courses and the institutional capacity to deliver the programs rather than accrediting the learning achieved.

A Medical School Program for International Recognition of Excellence in Education (ASPIRE) is an initiative provided by AMEE now focuses on micro details in the education process as students' assessment, UG students engagement, and social accountability. The aim of the initiative is to recognize and promote outstanding performance and excellence in teaching and learning in medicine, taking into account the difficulties and contexts in which a school is operating. It is not a global accreditation process, but rather a global process for driving and recognizing world class excellence in medical education. This could be valuable and attractive to many stakeholders. The benefit to the school seeking recognition of excellence in medical education, aside from the impetus to improved quality, will be the opportunity to promote their attainment of the criteria **(19).**

In conclusion, NCAAA and NAQAAE standards allow for assessment of quality management processes (CQI) rather than assessment of quality (TQM). On the contrary, LCME standards did not cover the quality assurance management and institutional evaluation processes areas. Consequently, one of the deliverables of the study was the accomplishment of an audit manual which encloses the terms of ideal practice and detailed processes in all areas that measure the educational effectiveness and institutional capacity based on the global standards from all three accrediting bodies An example is shown in **(Appendix- 2).**

Another issue which affects accreditation is the variability in the levels of enforcement of accreditation standards by various accreditation bodies. **Van Zanten et al. (2008) (20)** stated that *"although over half of all countries with medical schools indicate that they have a national process for accrediting medical education programs, the nature of the various authorities and levels of enforcement vary considerably"*. This is embodied in the fact that some accreditation bodies develop under the auspice of ministries as Ministry of Higher Education, which additionally carries the risk of undermining the support of accreditation programs due to political changes, shifting personnel, or more immediate needs. Moreover, despite global trends indicating an increasing focus on the quality of education programs, data linking accreditation processes to the production of more highly skilled doctors and, ultimately, better patient care are lacking. Hence emerges the need for an international accreditation program which creates

convergence of *key standards* and their evaluation methods. This program should also address the possibility of developing an international accreditation council, which would bear responsibility of setting global standards and key good practices items in higher education quality; in addition to setting up standards for accrediting the accrediting bodies. Such set of standards should be generic, hence could be used by all accrediting bodies, regardless of their national development status or culture. Requirements for each standard should be classified into "Minimal Requirements" and "Excellence Requirements". Confining requirements to the earlier carries the risk of reductionism of quality of performance to the minimal required level and hence limits the quality ceiling to a lower level. On the other hand, excellence requirements render the ceiling for quality infinite thus spur higher education institutions to CQI and promote their competitive stance in the national, regional and global community.

More importantly, there is a need for developing a system of quality assurance based on learning, as well as developing review methods appropriate to a new focus on learning regardless of its setting or the provider. This requires concerted international action to stimulate the process of developing consensus on using new ways to assess learning and achieve the *shift from "focus on settings" to "focus on learning"* **(2)**. Hence, what is currently occurring could be called "Licensing" or "Recognition" but not "Accreditation".

Taking the previous step into consideration, a study has been started in the Faculty of Medicine in King Abdulaziz University (FOM_KAU)- KSA to not only develop standardized processes, but to enhance the "Alignment and Integration of Processes" in addition. A Quality & Academic Accreditation Unit (QAAU) was established in FOM-KAU to establish effective quality management by getting together quality assurance and quality enhancement as complementary parts of effective quality management. Processes that lead to quality improvement of the educational program in all its aspects (design, implementation, assessment and evaluation) are set. This was based on gathering data to evaluate the current status at the time of the study reflected in the results from evaluation of the program and course specifications and their intended learning outcomes; assessment process adopted in the Faculty; as well as the evaluation process. In order to guarantee quality enhancement, processes have had to be "Standardized" and agreed upon by the stakeholders. Standardization included the standard of work, skills and outputs **(21).** It allowed us to see variations and secure control. This required training packages for stakeholders based on criteria that were defined from the set of standards from all three accrediting bodies included in the study. Processes were supervised and monitored; results were discussed in curriculum committees' meetings which acted as the glue that allows good communication, and "Feedback" was delivered to all stakeholders. The practice not only relied on "Feedback" as a mean for communication but most importantly, encouraged "Feed-forward" from stakeholders to the (QAAU). This resulted in observable improvements in the design, and implementation of courses as well as in the assessment process. Although improvement is incremental maintaining the direction of educational processes, yet the next level of the aspired quality enhancement would involve doing things in new innovative ways which involve transformational changes **(22 & 23)**. As a result, coordination of operations was achieved and high performance was observed and reflected in improvement of the courses as well as in the quality of students' performance. The detailed results would be published in another study. On the other hand, low performance of the remaining courses was due to either poor team structure and hence poor commitment, communication and collaboration; or improper planning of the work that has to be done by the course coordinators.

Limitations of the Study:

Matching the standards was performed by the study group and hence it is a subjective viewpoint; however, it is backed by literature from reputable experts in the field as well as well established organizations. In addition, the deliverables embodied in the manual for good practice would be useful for medical education accreditation processes in any medical setting. This compensates for the subjectivity of results and ameliorates the validity of the conclusions.

Conclusion & Recommendations:

Whatever the roots from which each set of standards was born, all sets almost have similar approach and scope. This facilitates the initiative of setting global key standards agreed upon by all accrediting bodies worldwide in order to demolish barriers for certifying medical graduates to attach to foreign training programs.

Hence, it is recommended to establish a "Regional Accreditation Union in the Middle East and Gulf Region" adopting the same standards and allowing "Regional Credit Transfer" between higher education institutions in general and medical schools in particular.

In addition, establishment of an "International Society for Quality in Higher Education" with "Regional Offices" in developing countries to serve information exchange for national accreditation programs is emphasized. This society should act as an accreditor of accrediting organizations.

Standards of any accrediting body should be enlightened by the social accountability principles set by the WHO to not only produce graduates with competencies compatible with the community but also to maintain the workforce in such communities and minimize the healthcare workforce crisis.

Detailed clear processes allowed the ceiling for quality improvement to be infinite and secured transferability and provoked the capability of dissemination of good practice. They also guide institutions to perform correctly thus securing expected outcomes.

Coordination of operations within the institution ensured high performance by standardizing processes regarding standards of work, skills and outputs; communicating the processes to stakeholders ; monitoring results and discussing them with both constructive feedback and feed-forward.

Declaration of Interest:

The authors report no declarations of interest.

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Appendix- 1: Benchmarking NCAAA and NAQAAE Standards against LCME, Standards:

<table>
<tr><td colspan="6">NCAAA
(A) Institutional Context
(A.1) Mission & Objectives (1.1 to 1.5)</td></tr>
<tr><td colspan="3">LCME
IS.1</td><td colspan="3">NAQAAE
[I.1 (1.1.2 – 1.1.3)]</td></tr>
<tr><td>Match</td><td>Match to Some Extent</td><td>Absent</td><td>Match</td><td>Match to Some Extent</td><td>Absent</td></tr>
<tr><td colspan="6">The mission & objectives are fully covered by the standards.</td></tr>
<tr><td colspan="6">NCAAA
(A.2) Governance & Administration (2.1 to 2.6)</td></tr>
<tr><td colspan="3">LCME
(IS.4 to IS.11)</td><td colspan="3">NAQAAE
[I.1 (1.1.1; 1.1.4; 1.1.5; 1.2; 1.3)]
(I.2 – I.3 – I.5)</td></tr>
<tr><td>Match</td><td>Match to Some Extent</td><td>Absent</td><td>Match</td><td>Match to Some Extent</td><td>Absent</td></tr>
<tr><td colspan="6">The governance & administration aspects are fully covered by the standards.</td></tr>
<tr><td colspan="6">NCAAA
(A.3) Management of Quality Assurance & Improvement Processes (3.1 to 3.5)</td></tr>
<tr><td colspan="3">LCME
(not mentioned)</td><td colspan="3">NAQAAE
[I.8 (8.1; 8.2; 8.3)]
[II.8 (8.1; 8.2; 8.3)]</td></tr>
<tr><td>Match</td><td>Match to Some Extent</td><td>Absent</td><td>Match</td><td>Match to Some Extent</td><td>Absent</td></tr>
<tr><td colspan="3">Surpassed LCME standards which did not mention this aspect.</td><td colspan="3">Match with NAQAAE & cover all aspects of institutional evaluation & quality management.</td></tr>
<tr><td colspan="6">NCAAA
(B) Quality of Learning & Teaching
(B.4) Learning & Teaching</td></tr>
<tr><td colspan="3">LCME
II (ED.1 to ED.7)</td><td colspan="3">NAQAAE
[II.1 (1.2.5; 1.2.6; 1.2.8; 1.2.10)]
(II.2; II.3; II.4)</td></tr>
<tr><td>Match</td><td>Match to Some Extent</td><td>Absent</td><td>Match</td><td>Match to Some Extent</td><td>Absent</td></tr>
<tr><td colspan="3">LCME standards concerning educational program development & quality assurance management are not addressed specifically or clearly; though this is provided modestly in ED.33 & ED.35.</td><td colspan="3">Covered completely</td></tr>
<tr><td colspan="6">NCAAA
(C) Support for Student Learning
(C.5) Student Administration & Support Services</td></tr>
<tr><td colspan="3">LCME
III (MS.3 to MS.6)
(MS.10 & MS.11)
(MS.18 & MS.19)
(MS.23)
(MS.26 to MS.30)
(MS.32 to MS.35)</td><td colspan="3">NAQAAE
II.1 (1.1 to 1.3)</td></tr>
<tr><td>Match</td><td>Match to Some Extent</td><td>Absent</td><td>Match</td><td>Match to Some Extent</td><td>Absent</td></tr>
<tr><td colspan="6">NCAAA standards do not address diversity; services for disabled students; the ability of students to review & challenge their records; as well as alumni services.</td></tr>
<tr><td colspan="6">NCAAA
(C.6) Learning Resources</td></tr>
<tr><td colspan="3">LCME
(ER.11 & ER.12)</td><td colspan="3">NAQAAE
II.4 (4.5)</td></tr>
</table>

			I.6 (6.2.3)		
Match	**Match to Some Extent**	**Absent**	**Match**	**Match to Some Extent**	**Absent**
All three agencies match in the general statements of the standards addressing the library and IT services. The LCME added some quantitative data to the qualitative data required for assessing the learning resources; however, they are not informative hence decisions for judging those resources are not based on objective indicators. On the contrary, NAQAAE clearly set key indicators which are both quantitative and qualitative and most importantly informative and precise enough to be observed and measured.					
NCAAA **(D) Supporting Infrastructure** **(D.7) Facilities & Equipment**					
LCME **(ER.4 to ER.8)**			**NAQAAE** **I.6 (6.1.2; 6.1.3; 6.2.1; 6.2.2; 6.2.3)** **II.4 (4.5.2)**		
Match	**Match to Some Extent**	**Absent**	**Match**	**Match to Some Extent**	**Absent**
LCME offers professional accreditation specific for medical education. As a result, standards (ER.6 to ER.8) are highly specific as a key educational resource for medical education (teaching hospital & clinical settings).					
NCAAA **(D.8) Financial Planning & Management**					
LCME **(ER.2 & ER.3)**			**NAQAAE** **I.6 (6.1.1; 6.2.1)**		
Match	**Match to Some Extent**	**Absent**	**Match**	**Match to Some Extent**	**Absent**
* LCME standards in this aspect are confined to the revenues, expenditure and the balance; whereby reviewers relate the balance to their meetings with staff members and administrators to check for adequacy of budgeting in relation to the institution's capacity to achieve its mission. *NAQAAE standards are much more matching with NCAAA ones; whereby they cover this aspect in a more specific & systematic manner, which not only allows institutions to check for compliance to the standards but also act as a guide for ideal practice & hence drives institutions towards CQI.					
NCAAA **(D.9) Faculty & Staff Employment Processes**					
LCME **(FA.1 to FA.14)**			**NAQAAE** **II.5**		
Match	**Match to Some Extent**	**Absent**	**Match**	**Match to Some Extent**	**Absent**
* LCME standards are comprehensive in this area and match the NCAAA standards to a great extent. However, NCAAA standards are more specific & followed by clear items of good practice. * NAQAAE standards in this area lack policies for recruitment, but otherwise covered the remaining aspects.					
NCAAA **(E) Community Contributions** **(E.10) Research**					
LCME **I.B (IS.13 to IS.15)**			**NAQAAE** **II.6**		
Match	**Match to Some Extent**	**Absent**	**Match**	**Match to Some Extent**	**Absent**
* LCME standards are not systematic; or informative. They lack many aspects in this area & which renders the process of self assessment incomplete & does not result in giving the big complete picture. *NAQAAE standards completely match all aspects in this area with NCAAA ones. Both are comprehensive.					
NCAAA **(E.11) Institutional Relationships with the Community**					
LCME **I.B (IS.14A)**			**NAQAAE** **I.7**		
Match	**Match to Some Extent**	**Absent**	**Match**	**Match to Some Extent**	**Absent**
* LCME is deficient in this area. *NAQAAE & NCAAA standards completely cover this area starting from planning to community services & environmental development, going through community partnership & engagement, & ending with measuring satisfaction index of the community stakeholders with the institution's performance.					

Appendix- 2: Recommended Format for Writing the Standard Statement, Requirements, ad Processes

Section (I): Institutional Setting **Standard** **Requirements** **Processes**

Serial	Standard/Requirements/Processes	Evidence
IS.1 (LCME) *S.1 (NAQAAE) Part of S.1 (NCAAA) *(Key Standard)	**Each medical school must engage in a planning process that sets the direction for the institution and results in measurable outcomes.**	
1.1	Presence of a strategic plan (SP) which is approved; achievable within its available resources.	Documents: SP; FB approval minutes; Operational plan (budget)
1.2	SP is based on a proper strategic planning process.	
1.2.1	SWOT & gap analysis	Documents: survey tools (qnaires; interview minutes)
1.2.2	Mission	Documents: SP
1.2.3	Vision	
1.2.4	Goals	
1.2.5	Strategic objectives	
1.2.6	Operational plan	
1.3	SWOT & gap analysis	
1.3.1	SWOT analysis diagnoses strengths & weaknesses of the Faculty.	Documents: SP
1.3.2	SWOT analysis diagnoses opportunities & threats of the external environment.	
1.3.3	Participation of both internal & external stakeholders.	Documents: Committee structure; Minutes of meetings
1.3.4	Presentation of results of analysis to all stakeholders.	
1.4	Alignment between Faculty & University strategies: mission, goals, strategic objectives	Documents: SP of university
1.5	SP is inclusive	
1.5.1	Mission/ Vision	
1.5.1.1	Approved by Faculty Board (FB)	Document: FB approval minutes
1.5.1.2	Reflects Faculty's role in "Education", "Community Engagement", & "Research"	
1.5.1.3	Stakeholders shared in formulating the mission	Document: meetings minutes; Interviews: staff; leadership; students
1.5.1.4	Reflects university's mission	
1.5.1.5	Publicized in various ways	Observation: website; posters; fliers; Faculty guide
1.5.1.6	Reviewed & updated regularly	Interview: leadership; Documents: meetings minutes
1.5.1.7	Decisions taken are mission-sensitive	Document: FB approval minutes
1.5.2	Goals & Strategic Objectives (SMART)	
1.5.2.1	Based on SWOT analysis results	
1.5.2.2	Secure accomplishment of mission	
1.5.2.3	Stakeholders shared in formulating them	Document: meetings minutes
1.5.2.4	Presented & discussed with stakeholders	Document: meetings minutes
1.5.2.5	Approved by Faculty Board	Document: FB minutes
1.5.2.6	Publicized in various ways	Observation: website
1.5.2.7	Characterizes the Faculty from other institutions	Indicators (indirect): - Scores of graduates in: Saudi Board exams; International exams - Progress of number of applicants to the Faculty Documents: alumni monitoring

		register
1.5.3	Presence of Operational Plan/ its custodian	Document: operational plan + committee structure
1.5.3.1	Covers the strategic objectives	
1.5.3.2	Shows procedures of implementation	
1.5.3.3	Nomination of persons responsible for implementation of tasks	
1.5.3.4	Time-lined	
1.5.3.5	Contains success indicators	
1.5.3.6	Translated to a budget	
1.5.3.7	Monitored; reported; discussed	Document: Evaluation report; FB minutes