

# An Analysis of Institutional Audits: Basis for Teaching, Learning and Assessment Framework and Principles

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**Abstract**—The dynamism in education, particularly in the area of teaching, learning and assessment has caused Higher Education Institutions (HEIs) worldwide to seek for ways to continuously improve their educational processes. HEIs use outcomes of institutional audits, assessments and accreditations, for improvement. In this study, the published institutional audit reports of HEIs in the Sultanate of Oman were analyzed to produce features of good practice; identify challenges along Teaching, Learning Assessment (TLA); and propose a framework that puts major emphasis in having a quality-assured TLA, including a set of principles that can be used as basis in succeeding an institutional visit. The TLA framework, which shows the TLA components, characteristics of the components, related expectation, including implementation tool/strategy and pitfalls can be used by HEIs to have an adequate understanding of the scope of audit and be able to satisfy institutional audit requirements. The scope of this study can be widened by exploring the other requirements of the Institutional Audits in the Sultanate of Oman, particularly the area on Governance and Management and Student Support Services.

**Keywords**—Accreditation, audit, quality assurance, teaching, learning and assessment.

## I. INTRODUCTION

HEIs worldwide rely on Institutional Audits, Assessments and Accreditations as an approach to ensure quality in their educational processes. They use outcomes from any of these approaches to sustain or continuously improve their provision of higher education programs, degrees, awards and qualifications at a certain quality or standards required. Through an examination of the quality assessment procedures, methods and criteria, the outcomes of the approach are used to enhance quality in HEIs and identify actions that need to be undertaken [1]. It is believed that the enhancement of quality is determined by the evaluation procedure and the implementation of subsequent change. Consequently, other HEIs also refer to the features of good practice generated from the outcomes of these approaches. In fact, various reports show that good practices in promoting and enhancing high quality in teaching and learning are culled from the outcomes of Institutional Audits [2], [3]. These good practices are shared

with other institutions and best viewed as a stimulus for reflection and further development.

Audits, assessments and accreditations are not only used by HEIs as a quality improvement tool which brings positive effect to institution's Quality Management System (QMS) and to service development [4]; but also considered as lever for internal improvement [5], serving as motivation to self-assess and improve the core business and support services of the institution.

In the Sultanate of Oman, there is an entity that is mandated to regulate the quality of HEIs to ensure that HEIs meet and maintain international standards and at the same time encourage them to continuously improve their quality mechanisms. The entity – Oman Academic Accreditation Authority (OAAA) in response to the mandate, conducts Quality Audit, which is aimed to provide a constructive feedback to the HEIs for continuous improvement. The OAAA published the first review report in 2009 and to date, there are 44 published reports in its website [6].

The HEIs in Oman take actions based on the published reports in preparation for the Standards Assessment, where the emphasis is empirically measuring whether the HEI has met the institutional quality standards published by the OAAA. Such process is similar to the institutional audits conducted in other countries [7], where HEIs prepare improvement plans to address the recommendations in the audit report and a progress report follows two years from the receipt of the audit report.

## II. RESEARCH PROBLEM

The Institutional Audit is a review process used by the OAAA for HEIs in Oman, which is carried out by a team of academics who review an institution's quality and standards based on a certain set of pre-established requirements. Institutional Audit Reports are published and results vary from one institution to another. Based on the scrutiny of 15 reports, majority of the HEIs reviewed within the period of 2 years (2012-2014) obtained more recommendations particularly on the areas of Governance and Management, than Commendations and Affirmations. In fact, the average number of commendations, affirmations and recommendations of the Audit Reports [5] for quality audits from 2012 to 2014 are 3, 9 and 25 respectively, where recommendations take 68% of the overall findings. Considering that the HEIs, based on the HEI general information in the Audit Reports [5] have been established at an average of 12.5 years, with 8 years as the

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shortest and 32 years as the longest, and that the average student population at the time of Audit is 1919, with an average of 147 staff (academic and administrative combined) it is interesting and fitting to explore the reasons why HEIs in Oman tend to have more recommendations, indicating that there are more requirements to comply with reference to the scope of Audit. Although the published reports show more recommendations along governance and management, the intent of this research is to focus on teaching, learning and assessment considering the fact that this is the heart of any higher educational institution.

Based on the scope of Audit, there are three (3) areas that can be clustered under teaching, learning and assessment: (1) Student Learning by Coursework Programs, (2) Student Learning by Research Program and (3) Staff Research and Consultancy. These three areas include indicators/standards along graduate attributes, curriculum, teaching quality, and faculty qualifications among others. Specifically, Student Learning by Coursework Programs includes indicators covering teaching, programs and assessment. Its focus is on managing the quality of student learning by coursework. On the other hand, Student Learning by Research Program focuses on institutional systems for managing the quality of student learning by research; and Staff Research and Consultancy focuses on the extent the HEIs engage in research. Research is included as part of the teaching, learning and assessment given the role it plays on teaching. As found out in various researches, there is a positive correlation between indicators of teaching quality and research, where research complements teaching and it is used by faculty members to remain current in their field as well as to advance their discipline [8]. In addition, those who are actively involved in research are in a better position to update and improve their course contents, and deliver them using novel methodologies [9].

This study then aimed to analyze the Audit Reports published from 2012 to 2014, covering 15 institutions and identify features of good practice and common challenges along teaching, learning and assessment; and propose a framework that can be used as a reference in order to improve HEI compliance to the scope of institutional audit in the Sultanate of Oman, along the area of teaching, learning and assessment.

### III. METHODOLOGY

The study employed a descriptive design using document analysis as the main data collection method. Various published institutional audit reports were considered and analyzed based on the research questions. From these reports, the summary of commendations and recommendations were gathered, clustered, and analyzed. In addition, relevant studies on the influences/contributions of institutional audits and accreditations in higher education teaching, learning and assessment were also analyzed and used as reference to propose a framework on teaching, learning and assessment.

### IV. DISCUSSIONS

#### *A. Institutional Audits and Accreditation in Higher Education (HE)*

As implemented in various countries, audits are externally-driven meta-analysis of internal quality assurance, assessment and improvement systems. They focus on processes that ensure quality and the methods by which institutions and entities put in place to attain quality. In a recent study on Teaching Quality in HE, the literature review showed the influence of quality audits on teaching quality [10]. It affirmed that external quality audits together with internal university processes have caused changes and improvements in teaching and learning in many countries, such as UK, New Zealand and Hongkong. It was also mentioned that quality audits in HE are more about setting thresholds for quality and encouraging improvement. The importance of quality audit in HE was also reaffirmed in a study on the impact of quality assurance in academics [11]. It was discussed in the study how quality audit assessed teaching and learning in the University. The study revealed that as a result of quality audit, academics was motivated to think about teaching aims and objectives, and was encouraged to be more reflective about teaching practice. In another study, quality-process review was implemented and its entire process was discussed, with a particular focus on teaching and learning in the program. The study presented that the process was conducted to assist institutions in their efforts to improve teaching and learning quality [12].

A study also showed a comparison of teaching and learning quality assurance in two (2) different education systems – English and Chinese, and it was found out that regardless of culture or any other differences in management, quality assurance and enhancement are encouraged in the systems [13]. The study also reaffirmed that features of good practice from audit outcomes are shared. It was concluded in the study that China can take useful lessons from the UK QA practices along learning and teaching, including the use of quality assurance agencies, external standards and methods.

Other studies reveal further the influences of accreditation in the HE. As mentioned in a study on international accreditation, accreditation has 2 roles: it is an external quality assurance; and it allows institutions to make part its quality management the activities/actions to be accredited or to maintain its accreditation [14]. In the same paper, the internationalization of quality practices in HE was explored using a case study. The study revealed that the institutional accreditation paved way to a set of changes, which are beneficial to the institution. The investments though for obtaining accreditation were larger than anticipated, which called the institution to increase its resources, ranging from learning management systems to new buildings to meet expectations and to expand as part of the institution's commitment.

Accreditations also paved way to the improvement of teaching and learning in specific programs. The continuous assessment of an engineering program was presented in a study and it was found out that there are various factors that

contributed to the success of the assessment [15]. The assessment results from both direct and indirect measurements manifested improved teaching and learning. Another study on assessment was also conducted to determine whether the graduates of the university were able to achieve the university expectations [16]. The study described the development of the student learning outcomes assessment system and it emphasized the utilization of the results of assessment, particularly to improve teaching practices and students' achievement; and for planning and budgeting decisions. The study also emphasized the importance of quality assurance processes in the success of the assessment system. There is also a study that revealed how accreditation has driven the institutional effectiveness efforts of community college campuses. The study presented how each college used specific standards to determine institutional effectiveness [17]. Indeed, audit/accreditation/assessment/process review provide benefits and significant contribution to the HE, particularly on teaching, learning and assessment.

#### *B. Features of Good Practice in Teaching, Learning and Assessment (TLA)*

A feature of good practice includes a practice or a process or a mechanism commended by the Review Panel. It is considered to have positively contributed to the institution's approach to TLA within the context of the institution. Under the Area of TLA, there are 14 commendations which are grouped into Graduate Attributes; Curricula; Research, Consultancy and Teaching; Teaching and Learning; and Assessment. The following paragraphs describe features of good practices culled from the published institutional audit reports:

##### 1. Graduate Attributes

Graduate attributes focus on the learning outcomes or characteristics that students are expected to have achieved by the time of graduation. In Oman, some HEIs were commended with the handling of their graduate attributes. The graduate attributes, which were jointly developed by various stakeholders, clearly mapped to the programs and communicated to the students were also assessed and valued by the employers. The graduate attributes are addressed in practice and the alumni and employers expressed that the graduate attributes are valuable both within the programs and in subsequent employment. Hence, a good practice in this regard is that, ***the graduate attributes developed should be mission-driven; assessed; and the results of the process should be used for improvement.***

##### 2. Curricula

Some HEIs in Oman were commended with the Development and implementation of a comprehensive process for the review of the curriculum. The curriculum development and review was an active process of interactions and reflection, and that the development and review processes ensured that the curriculum is benchmarked to national and international standards. The said process was iterative and committee driven for the development of one particular

health-related program and involved external stakeholders and international affiliates and institutions. As part of the review, HEIs were also commended for the review of program entry requirements and rigorous application of standards for entry into the degree program that support the HEI's strategic intent. This mechanism was employed to ensure that entry requirements are of international standards and at the same time ensure acceptable student academic progress. A good practice in this regard is that, ***standards and benchmarked requirements should be used for periodic program reviews, and internal and external stakeholders should participate in the review process yielding to a curriculum that is comparable nationally, regionally and internationally.***

##### 3. Research

HEIs were commended for having a Research and Consultancy Plan derived from its Mission, Vision and Strategic Plan with clear objectives. All its research outcomes were aligned to the HEI's mission and the strategy and performance against these was considered in an annual performance review. The HEI claimed as its strength the introduction of a research culture through a wide range of initiatives, including in-house research seminars, recruitment of staff with research records, keeping teaching load to a certain number of minimum contact hours, encouragement of collaborative research and organization of international conference. Such reflected a continuous growth worth noting. The various research planning documents of the HEI also indicated the importance of a research-teaching nexus. These were backed up by the active involvement of students in research projects as part of their course requirements. Such manifested a strong connection between the University's research and teaching activities. A good practice in this regard is that, ***the research and consultancy plan should be mission-driven and intertwined with the teaching activities in order to assure students' active involvement in research particularly through their course requirements.***

##### 4. Teaching and Learning

One HEI was commended for its full range of laboratories to support Engineering programs with state of the art equipment. The laboratories were well-staffed with good management. Such contributes to the overall delivery of high quality engineering education. Moreover, the review Panel was impressed the HEI's "high-end" IT in classrooms and workshops and its laboratories were also comprehensively equipped. The provision of up-to-date technology and equipment as supportive features of teaching and learning is included in the plans, policies and procedures of the HEI. Results of course evaluation showed that students were consistently satisfied with the teaching facilities. Such led to a conclusion that students and teachers enjoy excellent teaching and learning resources. A good practice in this regard is that, ***up-to-date technology and equipment which supports teaching and learning activities should be provided, and that such should be aligned to the profile of the HEI.*** Further, a commendation was given for the HEI's on-the-job training

(OJT) program, giving students an opportunity for exposure. The students enjoyed the OJT and they felt that they learned a lot, as confirmed by the results of the OJT survey. Similar survey by industry also showed the high quality outcomes of the program. The Review Panel was pleased with the effective processes in place to support OJT. A good practice in this regard is that, ***formal surveys should be conducted to determine effective processes and achievements in relation to OJT.***

#### 5. Assessment

Assessment includes all related components that reflect student performance, including examinations, moderation and academic security. Some HEIs were commended for their assessment system, where affiliate institutions contribute significantly to external moderation/benchmarking of assessment standards. The major contribution of the affiliate to the HEI is providing advice on assessment procedures, examination scripts, and awarding of grades. The Review Panel found out that the HEI has robust mechanisms in place for developing, moderating and remarking examinations that are effectively implemented. The affiliate for another institution also contributed along double marking and verification of selected papers; external examiners; module review reports and a well documented appeals process. This enabled the Review Panel to note the evidence of verification of assessment tasks, which allows for the development of appropriately contextualised assessments. Moreover, the Review Panel also saw evidence of internal moderation system implemented in an institution and improvements on the system include conducting internal moderation throughout the academic year and external examiners played a role in assuring the quality of assessment methods. A good practice in this regard is that, ***a robust approach to the development and moderation of examinations, where affiliates and external examiners are actively involved should be developed and implemented.*** Further a commendation was given for the HEI's system in ensuring the integrity and security of the assessment processes, where an examination committee, invigilation procedures, guidelines for invigilators and examination induction programs were set up. The Review Panel noted the tight security measures regarding the storage of examination scripts and the invigilation of examinations. A good practice in this regard is that, ***effective security measures surrounding the management of examination should be developed and implemented.***

#### C. Challenges along Teaching, Learning and Assessment (TLA)

Challenges along TLA include various recommendations, which require significant attention. Recommendations are issues the HEIs may not have identified, or about which they may have reached a different conclusions than the Review Panel. The recommendations can be grouped according to: Graduate Attributes; Curricula; Admission Standards; Student Performance; Teaching and Learning; Assessment; Research; and Faculty.

#### 1. Graduate Attributes (GA)

Many HEIs obtained recommendations along raising awareness, understanding and application of GAs and evaluation of the appropriateness of the graduate attributes. The Review Panel noted a lack of awareness of the GA across the student cohorts and staff. Such require a systematic awareness raising and embedding the GAs within the teaching and learning activities. A recommendation to clearly identify graduate attributes, in consultation with external stakeholders, and that these attributes are clearly mapped to curriculum goals was also given. The Review Panel was not able to find evidence that the HEI consulted with local stakeholders in identifying GAs. The Review Panel also gave another recommendation to ensure better alignment between the career paths open to graduates and the skills and knowledge the graduates bring to the workplace. These recommendations reflect that ***HEIs need more efforts in: (a) ensuring the participation of stakeholders in the development of their GAs; (b) ensuring the understanding of the GAs by students and staff; (c) appropriately aligning the GAs to the curriculum; (d) using suitable assessment methods for the GAs; and (e) utilizing the results of assessment for continuous improvement. HEIs should ensure that they adopt formal processes for the development, approval and effective use of graduate attributes and ensure that these attributes reflect appropriate consultation with relevant, local, external stakeholders and can be developed in students.***

#### 2. Curricula

Some HEIs received recommendations on the nature of their curricula. The Review Panel noted that the offered curricula did not reflect the intended nature of the program in line with the vision and mission of the HEI. Another recommendation given is along HEI's approach to the contextualization and localization of curriculum as well as mechanism to evaluate the effectiveness of the approach. The Review Panel noted the inconsistency on the approach. Moreover, many HEIs also obtained recommendation regarding the review process of the curricula. This recommendation arose from the fact that the review process is carried out on an ad hoc basis, carried out from the ground up, rather than with a systematic set of criteria and timelines for this review. In addition recommendation was also given on the basis that there were inconsistencies in the curricula and there was no balance between theory and practice. These recommendations show that ***HEIs need to adopt a systematic curriculum review, taking into account inputs from stakeholders to ensure relevance, responsiveness and balance of the curricula.***

#### 3. Use of Standards

This area includes recommendations on admission and entry criteria. Many HEIs obtained recommendations to review entry standards and admission criteria to academic programs in relation to specific program offerings and student performance. The Review Panel noticed that while there was

clear articulation of admission standards and entry procedures, there were concerns regarding the students' general level of preparedness for academic studies and their English language proficiency in particular. The Review Panel also noted of the HEI's approach in determining admission criteria, which may indeed result in students being admitted without academic preparedness to undertake the program. Moreover, there were some HEIs who obtained recommendations along their General Foundation Program (GFP), in which said program should be aligned with the GFP National Standards and subject entry standards of the BS programs, particularly the English component. A recommendation to implement minimum entry standards through reliable benchmarked assessment in all relevant subjects for students exiting the GFP and joining diploma/degree programs was also given. The Review Panel also noted that the GFP exit points should be reviewed in line with Oman Academic Standards for GFP. These recommendations show that ***HEIs need to ensure that the GFP is aligned with the Oman Academic Standards for GFP, and that HEIs use appropriate and benchmarked admission/entry standards to academic programs to assure that students are prepared and capable in meeting the requirements of the program.***

#### 4. Student Performance

Challenges under this area include recommendations along student progression and retention. Many HEIs obtained recommendations regarding the monitoring of student retention and progression. The Review Panel noted that HEIs do not have a detailed analysis regarding the student retention and progression. They also noticed that if analysis was there, it is not properly used to inform its planning and decision making processes. Another recommendation was given along the implementation of the HEI's Management Information System (MIS), that it should review its MIS to ensure having accurate data on student retention and progression and to investigate the reasons for the exceptionally high pass rates for a degree program. In addition, a recommendation to use MIS to monitor student progress and retention rates was also given. These recommendations imply that ***HEIs need to ensure the effective and efficient use of MIS in monitoring student performance, particularly progression and retention and use these reports for planning and decision making, including identifying at-risk students, and students who repeat courses.***

#### 5. Teaching and Learning

This area includes recommendations concerning the delivery of instruction and use of learning strategies/methods. Some HEIs obtained recommendations to develop a teaching learning plan/framework, including an e-learning strategy as a component. The plan/framework should include methods and strategies that are benchmarked against best international practice which provides guidance for academic staff for teaching and learning. This as well should also be used to as basis for determining professional development activities. A recommendation to increase efforts to embed applied learning and problem-based instruction was also given. The Review

Panel found proof of cases of unacceptable practices such as last minute changes to teaching plans and use of teaching methods that encourage rote learning. These recommendations show that ***HEIs need to identify and implement appropriate and benchmarked teaching and learning methods/strategies to ensure development and improvement of learning skills.*** Moreover, there were also HEIs who obtained recommendation regarding student placements, where the Review Panel saw little evidence on the provision of work placements or OJT for the students. ***HEIs need to formalize management of student placements in line with strategic aims and ensure systematic evaluation of its student placement.***

#### 6. Assessment

This area includes all recommendations relating to examinations, moderation, academic security, and marking. HEIs use various assessment practices such as use exams, marking schemes, moderation processes and reporting mechanisms. Other Universities also affiliate with other institutions for assessment purposes. However, the Review Panel expressed concerns about ongoing assurance that international standards of assessment are upheld. The Review Panel also noted some examinations being set from text book questions and that students were required to memorize the correct answers, and that recommendation coming from the HEI's Quality Department to address issues of examinations reflecting the qualification awarded was not achieved. Such led to the recommendation that the approach to assessment is reviewed and that benchmarking of assessment items be conducted. While other HEIs have comprehensive internal assessment moderation processes in place, the Review Panel considers that external input into the assessment process is required to assure appropriate standards. With these, ***HEIs need to deploy efforts to ensure that assessment practices and procedures be reviewed, where moderation (both internal and external) should be in-place and introduce external benchmarking component into its assessment system to ensure that international-standard student learning outcomes are maintained, in line with its strategic aims.*** Moreover, some HEIs also obtained recommendations along academic integrity and invigilation. While some HEIs have standard procedures for the storage of final examination papers and scripts, as well as invigilation, with a detailed roles and responsibilities of committees, there is limited evidence of a formal, robust, data driven, internal quality assurance process to support the monitoring of the assessment process, particularly the invigilation procedure. Such requires that ***HEIs need to strengthen its internal system for monitoring and reviewing its examination security and invigilation processes and ensure that improvements are informed by comprehensive, formal, internal data collection and analysis.*** The Review Panel also noted explicit examples of academic dishonesty, including plagiarism and cheating, and students have been penalized for the same, however there was no consistent, uniform documentation of incidents and there was also no plagiarism software installed. There were also several

instances where the Review Panel concluded that more work is required to combat plagiarism in order to ensure robust academic standards. With these, ***HEIs need to develop approach to combating plagiarism; ensure effective and consistent implementation of policies and procedures and review and refine penalties in order to ensure academic integrity.***

#### 7. Research

Most of the HEIs do not have a research plan that is aligned with the Strategic Plan. The Review Panel noted that there were research and consultancy policies and that there is also a plan to increase staff activity in research and consultancy, however, there was no research and consultancy plan in place to support this realization. Such recommendations show that ***HEI need to develop a research plan/framework that is aligned with the Strategic Plan and include strategies to increase research activities, support research performance as well as indicators for monitoring and evaluation.*** Some HEIs also do not have an effective approach in monitoring research ethics, where such should conform to modern, international standards of biosafety, and intellectual property rights among others. ***HEIs need to develop and implement policies along research ethics and intellectual property rights aligned to the copyright law of Oman and monitor and evaluate their effectiveness.*** Moreover, the Review Panel did not find evidence of systems, or practice, to incorporate research and scholarly activities into the teaching process. Such recommendation shows that, ***HEIs need to enhance the link between research and teaching and that a formal approach has to be developed and implemented to attain this.*** Along student research supervision, some HEIs do not have appropriate guidelines for the appointment of student research supervisors, where research supervisors are course tutors or may be sourced from other colleges. Such requires that ***HEIs need to develop research supervision guidelines; that includes appropriate training for research supervisors, monitoring the performance of the research supervisors as well as evaluating the effectiveness of the research supervision should be evaluated.***

#### 8. Faculty

Recommendations under this area center on faculty qualifications and professional growth to ensure quality teaching, as manifested in evaluation results. The Review Panel expressed its concern on the approach to staff development for the HEI, where the professional development activities conducted are not aligned with the professional development plan. For another HEI, the Review Panel also noted the little evidence of systems or activities that focused specifically on developing the pedagogic skills of the teaching staff. With these, ***HEIs need to develop and implement a comprehensive approach to staff development, with a focus on pedagogical and research skills to ensure an improved teaching quality.*** The quality of teaching is reflected through faculty performance evaluation, including student evaluation as a general practice. Some HEIs have procedures in-place in

this regard however, these are not regularly and consistently applied and the results of evaluations are not properly utilized. The Review Panel also noted that addressing teaching quality was patchy across the colleges. This arose from the instances where teacher portfolios are outdated or not all teachers have portfolios, teachers are not provided with the evaluation feedback and teachers do not also understand the value of having an up-to-date portfolio. With such, ***HEIs need to review the system of monitoring the quality of teaching to ensure that it is effective and consistently implemented.***

#### D. Framework for TLA

Considering the benefits and the effects of audits in the HEIs in Oman, it is important to have an adequate understanding of the scope of audit and propose a generic framework along teaching, learning and assessment in order to be able to satisfy the requirements of the Audit. Given the features of good practice along TLA and with an analysis of the challenges along the same area, this study arrived at a framework that puts major emphasis in having a quality-assured TLA. In addition, the framework was also based on the analysis of correlation of the identified areas, as shown in Table I. It could be seen from the table that areas complement each other. This means that there are various elements from each component that are useful and important to the other area. This also implies that there is none from the areas that should be disregarded.

TABLE I  
CORRELATION OF TLA AREAS

*Criteria (A)	*Criteria (B)						
	GA	C	RC	TL	A	F	SP
Graduate Attributes (GA)		✓		✓	✓		✓
Curricula (C)	✓		✓	✓	✓	✓	✓
Research and Consultancy (RC)	X	X		✓	X	✓	X
Teaching and Learning (TL)	✓	✓	✓		✓	✓	✓
Assessment (A)	✓	✓	X	X		X	✓
Faculty (F)	X	✓	✓	✓	✓		✓
Student Performance (SP)	✓	✓		✓	✓	✓	

\*A Correlates to/Impact B

The proposed framework is depicted in Table II, where it shows the scope/components that influence TLA, with their corresponding features/characteristics and the related expectation/action; as well as corresponding sample implementation tool/strategy and pitfalls.

Considering the framework above, the following principles may be used by HEIs to ensure preparedness for Institutional Visit along Student Learning by Coursework Programs, Student Learning by Research Program and Staff Research and Consultancy:

1. Policies, plans and activities are driven by the mission.
2. Decisions and processes are driven by data, such as surveys and assessment results.
3. Graduate Attributes, Curriculum, Academic Practices/ methodologies/strategies are guided by standards and reference points.

4. All processes, activities and mechanisms are implemented as written, thoroughly documented, monitored and results of the processes are utilized.
5. Systematic and consistent mechanism is needed to have established academic processes and procedures.
6. Educational processes and academic practices focus on efficiency measurement and evaluation.
7. Internal and external stakeholders' inputs and feedback are considered in any academic undertaking.

TABLE II  
PROPOSED TLA FRAMEWORK

Scope	Features/Characteristics	Expectation/Call for Action	Sample of Implementation Tool/Strategy	Sample Pitfalls
<b>Graduate Attributes</b>	<ul style="list-style-type: none"> <li>• Mission-driven</li> <li>• Reflects participation of stakeholders</li> <li>• Appropriately Assessed</li> </ul>	<ul style="list-style-type: none"> <li>• Understood and applied</li> <li>• Aligned to the curriculum goals</li> <li>• Results of processes are utilized for improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Wide dissemination of the mission</li> <li>• Functioning Committee composed of alumni, students, and employers among others</li> <li>• Application of benchmarking criteria and process</li> <li>• Alignment/Mapping of reference points to the curricula</li> </ul>	<ul style="list-style-type: none"> <li>• Non-inclusion of external stakeholders during the formulation of the mission</li> <li>• Non-utilization of assessment results</li> <li>• Disregard of reference points</li> <li>• Lack of consideration of market needs</li> </ul>
<b>Curricula</b>	<ul style="list-style-type: none"> <li>• Relevant, responsive and reflect balance between theory and practice</li> <li>• Comparable to national and international standards</li> </ul>	<ul style="list-style-type: none"> <li>• Standards and benchmark requirements are used for periodic review</li> <li>• Stakeholders participate in the review</li> </ul>	<ul style="list-style-type: none"> <li>• Use of Key Performance Indicators (KPIs) in monitoring and evaluation of research plan</li> <li>• Integration of research in teaching</li> </ul>	<ul style="list-style-type: none"> <li>• Mismatch between research targets and development activities</li> <li>• Absence of research thrust/framework</li> </ul>
<b>Research</b>	<ul style="list-style-type: none"> <li>• Mission-driven</li> <li>• Intertwined to teaching</li> <li>• Has suitable policies related to ethics and intellectual property</li> <li>• Has research guidelines/procedures for student research including research supervision</li> <li>• Has indicators for monitoring and evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Aligned to the strategic plan and goals of the institution</li> <li>• Include strategies to increase faculty research activities and research support</li> <li>• Monitored and evaluated for effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• Use of up-to-date teaching resources and dynamic TL strategies</li> <li>• Utilization of survey results for curriculum improvement</li> <li>• Implementation of moderation guidelines/policy</li> <li>• Involvement of External Examiners</li> </ul>	<ul style="list-style-type: none"> <li>• Absence of mechanism to determine TL effectiveness</li> </ul>
<b>Teaching and Learning</b>	<ul style="list-style-type: none"> <li>• Supported by sufficient up-to-date technology and equipment</li> <li>• Strategies/ methods are appropriate and benchmarked</li> </ul>	<ul style="list-style-type: none"> <li>• Resources are aligned to the profile of the institution</li> <li>• Formal surveys are applied to determine effective processes and success</li> </ul>	<ul style="list-style-type: none"> <li>• Use of up-to-date teaching resources and dynamic TL strategies</li> <li>• Utilization of survey results for curriculum improvement</li> <li>• Implementation of moderation guidelines/policy</li> <li>• Involvement of External Examiners</li> </ul>	<ul style="list-style-type: none"> <li>• Absence of mechanism to determine TL effectiveness</li> </ul>
<b>Assessment</b>	<ul style="list-style-type: none"> <li>• Has a robust approach for developing and conducting exams</li> <li>• Comparable and benchmarked</li> <li>• Has effective measures to ensure integrity and security of exams</li> </ul>	<ul style="list-style-type: none"> <li>• Affiliates and external examiners are involved in the assessment system</li> <li>• Comprehensive, formal, internal data collection and analysis are used for improvements</li> <li>• Appropriate tools and strategies are used to assure academic integrity</li> </ul>	<ul style="list-style-type: none"> <li>• Use of Faculty Performance Evaluation Tool</li> </ul>	<ul style="list-style-type: none"> <li>• Poorly designed assessment scripts</li> <li>• Absence of assessment feedback</li> </ul>
<b>Faculty</b>	<ul style="list-style-type: none"> <li>• Professionally qualified and has adequate pedagogical and research skills</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive approach to faculty professional development</li> <li>• Consistent approach/system of monitoring teaching quality is applied</li> </ul>	<ul style="list-style-type: none"> <li>• Use of Faculty Performance Evaluation Tool</li> </ul>	<ul style="list-style-type: none"> <li>• Mismatch between courses taught and faculty specialization</li> </ul>
<b>Student Performance</b>	<ul style="list-style-type: none"> <li>• Reflected by retention and progression analysis</li> </ul>	<ul style="list-style-type: none"> <li>• Effective and efficient use of MIS</li> <li>• Proper utilization of MIS Reports in planning and decision making</li> </ul>	<ul style="list-style-type: none"> <li>• Functional MIS</li> </ul>	<ul style="list-style-type: none"> <li>• Absence of retention and progression analysis</li> </ul>

## V. CONCLUSIONS

HEIs in the Sultanate of Oman have specific practices and procedures in place in the areas of Student Learning by Coursework Programs, Student Learning by Research Program and Staff Research and Consultancy in-place. There are features of good practice and challenges along graduate attributes, curricula, research and consultancy, teaching and learning and assessment. Based on the analysis of features of good practice and challenges, a framework on TLA that details the features/characteristics and expectation/call to outcome by scope; as well as corresponding implementation tool/strategy and pitfalls was proposed. The framework comes along with the basic principles that can be used by HEIs in the Sultanate of Oman to succeed the TLA components of the Audit Requirements/Scope.

## VI. RECOMMENDATIONS

Based on the analysis of the published reports and the requirements of the Institutional Audit in the Sultanate of Oman, the proposed generic framework and the underlying basic principles in succeeding institutional visits along the TLA should be considered as a stimulus for reflection and improvement by the HEIs in the Sultanate of Oman. HEIs can consider the generic framework and detail it with specific actions/strategies of implementation. A further study using the same published institutional audit reports, focusing on Governance and Management; and Student Support Services should be conducted to come up with a complete framework covering all the areas/scope/requirements of the institutional audit in the Sultanate of Oman.

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