

## معضلة الاعتماد الأكاديمي: دراسة حالة لإقرار نظام اعتماد مهيكّل على شبكة الانترنت في بيئة التعليم العالي السعودي

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(قدم للنشر في ١٢ / ٦ / ١٤٣٥ هـ، وقبل للنشر في ٤ / ٤ / ١٤٣٧ هـ)

الكلمات المفتاحية: الاعتماد الأكاديمي السعودي، معوقات عملية الاعتماد، نظام للاعتماد على شبكة الانترنت، الهيئة الوطنية للتقويم والاعتماد الأكاديمي (NCAAA).

ملخص البحث. ظهرت مبادرات ترسيخ ضمان الجودة في نظام التعليم السعودي في ثمانينات القرن الماضي، وتتولى الهيئة الوطنية للتقويم والاعتماد الأكاديمي (NCAAA) حالياً سلطة وضع معايير الجودة والمراجعة ومنح الاعتماد الأكاديمي للجامعات بالمملكة. على الرغم من المردود الإيجابي المتوقع لعملية الاعتماد على المؤسسات التعليمية، إلا أن إجراءات الاعتماد لا تزال تعاني عدداً من المشكلات التي بحاجة إلى حلول عاجلة. تتناول هذه الورقة بالبحث معوقات عملية الاعتماد، مع التركيز على المشاكل الرئيسية في جمع البيانات وكتابة التقارير. اعتمدت الدراسة منهج المقابلات الشخصية مع أعضاء هيئة التدريس والموظفين المشاركين في أعمال الاعتماد. تشير نتائج المقابلات إلى العديد من المشكلات في الممارسات الحالية لعملية الاعتماد بما في ذلك التكرار، واللامركزية في جمع وتخزين المعلومات، ونقص الخبرة، والتقديرات الخاطئة للوقت اللازم لجمع البيانات وصياغة التقارير. طرحت الدراسة فكرة إقرار نظام اعتماد مهيكّل على شبكة الانترنت (Structured Web-Based Accreditation System) لمعالجة وحل تلك التحديات.

شكر وتقدير: يشكر الباحثون عمادة البحث العلمي بجامعة الملك سعود، ممثلة في مركز البحوث بكلية إدارة الأعمال، على دعمها المالي لهذا البحث.

**Acknowledgement:** The authors extend their appreciation to the Deanship of Scientific Research at King Saud University, represented by the Research Centre at the College of Business Administration, for funding this research.

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## Appendix A

### Interview Questions

As presented above, data are collected through face-to-face unstructured interviews. More specifically, a dialogue-based interaction that is based mainly on 10 open-ended questions, with some more follow-up questions added when necessary, is adopted.

The questions are classified into three groups: introductory, challenges and problems, and solutions. Table 1 includes the questions.

**Table (1). Interview Main Questions.**

No.	Question
<b>Introductory Questions</b>	
1.	How do you learn about NCAAA and its accreditation requirements?
2.	What was your accreditation process experience like?
<b>Challenges and Problems</b>	
3.	What is your comment about the following sentence: The accreditation process has positive, significant influence on my teaching, research, and other duties.
4.	From your viewpoint, what are the main administrative obstacles to complete the accreditation requirements?
5.	From your viewpoint, what are the main challenges/problems in the accreditation process?
6.	From your viewpoint, what are the main pitfalls/drawbacks/problems in the accreditation documents and requirements?
<b>Suggestions and Recommendations: Solutions</b>	
7.	How do you think the administrative obstacles can be solved?
8.	How do you think the other challenges and problems can be solved?
9.	If you are the head of the Commission, how do you think the accreditation process could be handled better?
10.	What is your opinion about developing and using a web-based system to facilitate the accreditation process? (The system is described in some details.)

the system to provide all faculty members in the Kingdom with the quality expertise currently required for the academic job.

The system has to include an advanced *Query and Reporting Tool (QRT)*. QRT must include predefined queries that initiate all types of forms and reports required by the NCAAA from the data entered and saved in the system. In addition, the QRT should enable querying the database for any other ad-hoc reports. The QRT retrieves the data required for a particular report/form and organises the data into any particular predefined format. For example, short, full, or ad-hoc course specification reports can be extracted and developed from the database as long as all the data required about courses are saved without the need of any extra redundant efforts. Changing the Commission templates is not a problem anymore.

As this study is intended to shed the light on the concepts and applicability of SWAS, many capabilities that could be added to the system are omitted here. Development of unified standard exams of similar courses all over the kingdom, comparisons of similar academic programs, and benchmarking with suggested national, regional, and international institutions are among these additional functionalities.

#### 6- Discussion and Conclusion

NCAAA accreditation is a quality-affirming process that includes the development of the accreditation standards and the awarding of the accredited status. Contrary, it is a laborious task if not planned appropriately from the start-up. In this respect, interviews were conducted with faculty and staff members who are involved in the accreditation work to learn about the hardship of the process.

The interviews have exposed several pitfalls in the current practices of data gathering and reports formulation during the accreditation process. These include redundancy, decentralization of information, lack of expertise, inherent difficulty in reaching the quality assurance personals, conflicting feedbacks, and underestimation of the time required for data gathering and writing reports. These concerns represent real challenges and raise the need for introducing solutions.

This study has suggested the implementation of a *Structured Web-Based Accreditation System (SWAS)* to standardize the whole accreditation process, eliminate redundancy, and provide the availability of 24/7 communication channels. This study has presented the conceptual framework of SWAS while its implementation will be presented in a future study.

Finally, it has to be stressed that although this study has addressed the national accreditation in Saudi Arabia (NCAAA), its findings can still be generalised to any accreditation process including academic programs.

#### Acknowledgement

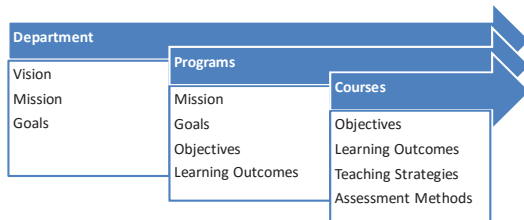
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the new forms. Transferring the data from the old templates to the new ones was a tremendously tedious work while most of the data was again unchanged. The laborious work for re-entering and updating the data could be absolutely avoided by adopting the SWAS.

As stressed above, automated data integration, propagation, and manipulation are essential for the ultimate utilisation of any SWAS. For example, data of academic departments, academic programs, and courses offered in each of these programs could be manipulated with consistent propagation and highest integration. Figure 2 represents how the department vision, mission, and goals have to be reflected in its all programs mission, goals, objectives, and learning outcomes, which in turn have to be considered in each of the courses the programs offer. And all of these have to be initially in a full compliance with the department's college and university vision and mission. Things should get more complicated when considering programs with different tracks, colleges with interdisciplinary departments, and universities including similar programs. It has been declared by a number of interviewees that considerable comments and feedback have been received with respect to the consistency among the objectives and goals of the departments, programs, and courses in their departments. It can be argued here that the absence of a platform that can present and organise these levels of details is an essential reason for the inconsistency problem rather than the human imprecision of setting the links required among those subjects.



**Figure (2).** Data Manipulation and Integration of Departments, Programs, and Courses.

From the implementation perspective, in the case of the accreditation of an academic bachelor program of a specific department, for example, an initial web-form for the courses offered in the program must include elementary information about each course, such as, course name, level, and description. Once the courses web-form is submitted, the data must be manipulated in a way of creating, for example, a course specification web-

form for each identified course. Data such as the university name, college, department, course code, course name, and so forth must be included automatically in the newly-created course specification forms. Some of this information could have a read-only restriction, while others must be left open for editing. Editing the course code, for example, must be propagated back to the courses form exactly as the data updated in the courses form propagated forth to the other forms, including the course specifications, requiring this data.

Data requirement and data granularity are key issues of the system. Both of the requirement and granularity could be simply identified through a comprehensive scan of all forms required by the NCAAA. Data requirements are identified by the fields of the forms to be filled, while the granularity by the least field that requires this data. For example, while the course description could be considered granular as any piece of it is not required in any form, the course learning outcomes are not. Each learning outcome is required to be linked to teaching strategies and assessment methods. From the perspective of database concepts, learning outcomes have a Many-to-Many relationship with both of teaching strategies and assessment methods. From the implementation perspective, it is so expected in the course specification web-form to include two fields for each learning outcome. The first field is represented by a Combo-Box from which the appropriate outcome “verb” is selected. The second field will be a Textbox to enable writing down the learning outcome. Two more Multiple-Selection Combo-Boxes have to be added to identify the different teaching strategies and assessment methods that correspond to the learning outcome (see Figure 3). Combo-Boxes could allow adding appropriate new items for outcome verbs, teaching strategies, or assessment methods.

**Figure (3).** Learning Outcomes Web-Form.

Validating the fields, recommending outcome verbs, suggesting teaching and assessment methods, and providing help or online assistance are all applicable through this type of system. The system can be also used as a learning mechanism for the appropriate manipulation of course specification in addition to its main accreditation purpose. Learning capabilities could be incorporated in all the parts of

resources, and make comments to speed up the process. In the absence of interactive reviews, departments or concerned personal may compile data or integrate information into the reports that may not be required by the NCAAA reviewers. This unnecessary excessive work could be avoided by using SWAS that may bank all the comments, reviews, feedbacks, explanations, and responses about every submission at one place.

SWAS payoff may surpass the expectations of its originators. For example, internationalization of higher education requires curriculum communication between educational institutions, as well as access to information about learning opportunities and/or outcomes achieved for other users like students, prospective employers, and administrative institutions (see, for example, Milan et al., 2013). To achieve such a centralized integration, SWAS may serve as a central reporting mechanism and a generator of publicly available trend data about Saudi universities. It may compile new measures and statistics from databases and disseminate trend data to colleges, departments, and programs. Each institute could benefit from publicly available trend data and guidance on how to compile, interpret, present, and use the data in different ways including benchmarking and submission. The availability of centralized data at SWAS could eliminate unnecessary data-gathering practices that do not address strategic concerns or are not required for NCAAA reviewers.

### 5- Structured Web-Based Accreditation Systems

As discussed earlier, SWAS could assist in overcoming a number of the common complications of the national accreditation and in streamlining its detailed process. This research discusses the conceptual ideas of the system. Detailed analysis or design of the system is out of the scope of this study and may be carried out in a future research.

SWAS is supposed to be a web-based application system with a predefined workflow. The workflow starts with the step of filling a registration form by the institution applying for the accreditation. The registration form is surely different if a university, college, department, or program is applying. An academic program application form is supposed to be automatically linked to its corresponding department, which is linked to its corresponding college, which is finally linked to its university (see Figure 1). In this way, data could be easily propagated back and forth among these levels of entities within a particular institution with a considerable elimination of redundancy and a significant saving of time.

The application forms should only include the elementary information about the applicants. A full access to material, forms, and regulations corresponding to the accreditation process is granted subject to the acceptance of the application. This access would allow the applicant to traverse the material, fill the forms, get online assistance, and receive feedback.

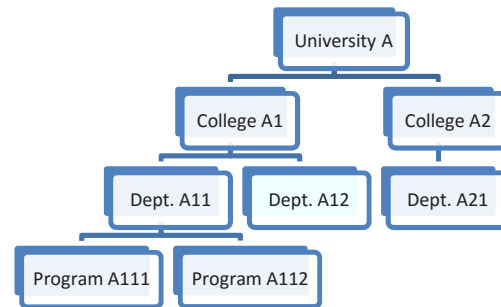


Figure (1). Institutional Entities Registered for Accreditation.

Online communication among similar departments or colleges could be permitted to enable new applicants to get benefited from the experience, expertise, and material of the institutions ahead. In addition, as SWAS keeps track of all communication and documents, it can automatically detect copied material and prevent plagiarism that always worries the Commission. Therefore, SWAS could enable an open communication environment with capabilities to limit the copyright infringement.

With respect to filling the accreditation forms, that is, entering the data, a unique different approach should be adopted. Forms should be just seen as reports that are required by the NCAAA about the candidates. Even the format of and data included in these forms are always a subject of revision by the Commission. Recently, new templates have been introduced by NCAAA. From that perspective, data must be organised and entered according to their relevance rather than the format of the reports required. This would actually help further reducing the data redundancy as each piece of information would be entered only once according to its relevance and can then be automatically propagated in all the reports in which it is required. Researchers of this article themselves have encountered the redrafting problem twice. Once a new curriculum for our department has been introduced, a comprehensive revision to the department's accreditation forms, despite most of the data was unchanged, has been undertaken. This incident occurred again when the Commission has introduced

outcomes and modularization are implemented haphazardly to just comply with Commission regulations, without a clear understanding of their pedagogical functions. It can be claimed with a significant confidence that, for many staff members, implementing the Commission regulations has turned to be a goal in itself rather than just a way for achieving quality.

On the other hand, institutions are not supported with the faculties who have extensive exposure to the accreditation process. Darandari and Wars (2011) and El-Maghraby (2011) suggest that the implementation and evaluation of quality assurance process in Saudi Arabia could be monitored by offering proper training to the concerned faculties. Otherwise, it will be extremely difficult for faculties to follow the accreditation process while do not equipped with required specialized skills and experience.

An unforeseen drawback in the current accreditation process is concerned with the different, sometimes conflicting, feedback about the submission. Researchers of this paper, for instance, have witnessed different feedback about accreditation submissions from an external consultant, quality vice-deanship in their college, and quality deanship in their university. Modifications based on the feedback could definitely take much less time if all are incorporated and received in a single report. A more serious problem has arisen when the feedback received did reflect different viewpoints about the report.

Another barrier in the progress of an accreditation project is the serious lack of communication between the quality assurance and accreditation units in the same and different colleges and universities. There is a need to synchronize information and past experiences by reviewing submitted documents for relevancy and redundancy. Redundancy, with all its complications, is used here refereeing to all aspects of the whole accreditation process including efforts, data, communication, and submission. For example, considerable efforts are duplicated by all the departments in the same college to get and report data that are common including university and college level data. It is required by the NCAAA that each program or department submits their own report including the same common data. Moreover, some data are required to be repeated in different forms. For example, just consider the program specification, course specification, and course reports files and the redundancy there. Resubmission of all the documents is expected if the Commission has

decided just to change the format of the documents as has recently happened in 2013.

Many other challenges and obstacles that have been identified during the interviews are excluded. These include unfair distribution of financial perk, reports ownership, unrealistic expectation of deadlines, and constrains on health and family. These critical challenges and their impacts are found irrelevant to this study, though significant, and thus will be addressed in a future research.

In the light of the barriers and the outcome of the interviews with the concerned subjects, this study recommends the implementation of a SWAS. First, the time and efforts of gathering, compiling, analyzing, managing, and presenting quantitative data in effective ways, not to mention the training and professional development required to accomplish these tasks, could exceed the time and efforts invested on designing and implementing a SWAS. Getting accredited is not a final destination; it is indeed just a beginning of an endless continuous journey of quality fostering and maintaining process. SWAS then is the platform that would enable and facilitate such a continuous communication between the academic institutes and the Commission.

Second, the correct information, requirements, suggestions, guidelines, feedback, and recommendations may be available through SWAS to provide a more robust, fair, and transparent system. The availability of a centralized online information system could streamline the whole accreditation process and speed up handling the requests than at present. The SWAS may be accessed by the quality units and deanships to review formal and final submitted documents from colleges and departments to make final accreditation decisions against new criteria of NCAAA. Through SWAS, NCAAA may disseminate information and guidance, explain the requirements for successful accreditation, and help institutes prepare for the formal accreditation submission. In this context, SWAS could be considered as a liaison between the institutions and the accreditation commission that enables effective communication with faculty and staff to help them integrate and align existing documents into a coherent accreditation submission.

Third, SWAS could work as an interactive whiteboard system on which all the comments and feedback are communicated. This availability of centralized reviews may help other departments to avoid obvious mistakes on the fly. Concerned committee members may contribute virtually on the process while not present physically. Administrators may also check the progress, assign additional

and the institution itself is proved to be the catalyst of the accreditation process. This foremost outcome by Abou-Zeid et al. (2014) is further discussed in this paper to highlight the risk of the added workload and understaffing that may lower the priority of teaching and research in favor of filling the accreditation forms and conducting the surveys required. There are similarities in Abou-Zeid findings and the work presented in this paper especially the lack of belief on the outcome of the accreditation to the institutions that may hinder the accreditation process immensely.

### 3- Methodology

To collect data, this study implemented unstructured interviews with faculty and administrators who belong to different academic departments.

Face-to-face interviews have been adopted as a better option than surveys for the purpose of this study. Surveys do not provide enough opportunity to discuss or explain answers. The advantages of an interview are that open-ended questions can be employed more successfully, particular questions of special interest can be added, follow-up questions can be inserted, and unclear questions or answers can be clarified. Question examples include "Tell me what was your accreditation process experience like?" and "How do you learn about the accreditation requirements?" Questions that permit a "yes-no" answer have been avoided. Such closed ended questions probably would not help to gain a complete picture of respondent's experience, such as, "Were you satisfied with your accreditation outcome?"; "Do you know what to do when you were asked to write a new report or suggestions?"; and so forth.

Interviews are often a better technique for collecting information about respondents' beliefs, attitudes, and experiences due to the openness of the process (Gill et al., 2008). The freedom of communication during interviews allows the interviewer to have a way of gaining deeper insights into the respondent, which yields richer information to understand complex topics about the accreditation process, complications, and possible solutions. Interviews may be documented by taking notes or they may be tape-recorded for later use. Recorded interviews allow the interviewer to further analyze and interpret the interview at a later time.

This study adopted a dialogue-based interaction using an unstructured interview format. The unstructured interview is intended to yield a conversation, rather than a simple question and

answer session. The outcome of such interview-derived information is deemed valid because the respondents' own words are used for analyzing and expressing their experiences (see, for example, Feagin et al., 1991). The interview process enhances the participation in the discussion and enables the interviewer to observe the non-verbal behavior due to the direct interaction with the interviewees.

Interview sessions with 10 main open-ended questions, and some more follow-up questions added as necessary, were used in the study (the questions are presented in Appendix A). The questions are developed to identify the views of 18 staff members and 4 administrators regarding the NCAAA accreditation problems and their opinion about the implementation of a SWAS as an ultimate solution. The selected staff members and administrative were associated to different departments of the College of Business Administration at King Saud University. The interview questions were developed and utilized by the researchers themselves. Data was collected during the interviews which lasted between 35-50 minutes with each subject. The random sampling was implemented to extract the results from the data. The data was transcribed manually by researchers.

### 4- National Accreditation: Challenges and Solution

This study addresses some of the complications that are encountered throughout the whole accreditation project from the viewpoint of staff members who have been deeply involved in implementing its procedures long enough to be able to judge its pitfalls. Some of these complications, as described below, are unnecessary and absolutely not inevitable by implementing and using a structured web-based system.

"Saudi national accreditation is by all means a long sophisticated process" is the fact that all of the interviewees agree upon. Initially, they confirmed the considerable lack of professional quality assurance expertise in many of the established universities around the kingdom. On the one hand, many of the faculty and staff members in these universities are not fully aware of accreditations concepts, such as, *Knowledge Performance Indicators (KPIs)*, *Total Quality Management (TQM)*, and *Benchmarking* (see, for example, Abulfaraj et al., 2006). Most probably quality committees will spend enormous amount of time to come up with documents required besides performing academic responsibilities and later will find out that their documents have substantial deficiency. There is a high risk that learning

minimum standards, is a positive development that will help to assure the continuing success of the profession. It helps to assure that graduates will have the knowledge required to successfully practice the profession and to be of service to society (Feisal, 2009). Darandari and Cardew (2013) believe that growing emphasis on the accountability, student learning, and quality of teaching in the education environment put the focus on the accreditation and procedures at the program and institutional levels. They stress that professional workforce is becoming internationally mobile and Saudi higher education institutions are expected to participate and compete in the global economy. Saudi institutions must be recognized worldwide in order for their graduates to compete. The international reputation of the Saudi graduates, therefore, depends mainly on the overall standards of Saudi institutions.

Despite the positive expectations and inevitability of the quality affirming process, it still includes a number of complications that need to be addressed and resolved should we require capturing all its potentialities. The main daunting task of the whole process is to furnish the vast amount of information and commentary required for the eleven standards. Institutes' quality units, composed mainly of faculty members, are constantly under pressure to collect enormous amount of data and evidences, and identify areas where improvement are required before the Commission may amend its requirements or introduce new templates for submission. In this context, Al-Yafi (2008) discusses the lack of guidance and expertise as a main obstacle to many institutions not to complete their initial evaluation reports on time.

This study discusses the common barriers, focusing on the key problem of collecting and presenting data. This discussion is based on the viewpoint of faculty and staff members who have been deeply involved in implementing the accreditation procedures in order to facilitate and streamline its process and in turn save time for the academic institutions to give proper attention to put quality, described in the reports, into action. The study analyses the factors that cause the complications and suggests the necessity of a *Structured Web-Based Accreditation Systems (SWAS)* to overcome the challenges.

This paper is divided into six sections. After this introduction, Section 2 includes a brief literature review. Section 3 introduces the methodology adopted in this research. Section 4 presents the main challenges that are encountered in the accreditation project and how a web-based system might address

these challenges. In Section 5, the SWAS is presented. Finally, Section 6 discusses and concludes the research.

## 2- Literature Review

Brodie et al. (2011) emphasize the requirements for academic institutes to provide robust evaluation of the quality of their degree programs and to benchmark that quality internationally. The study addresses multiple methods that may be used to evaluate courses and programs including student questionnaires, final grades, progression retention data, and graduate attribute and competency mapping. It also compares typical examples of such approaches to study the robustness of the link between the data collected and the evaluative judgments.

Mir and Ali (2011) present a comparison of two programs based on different accreditation criteria. The comparison is based on senior students' exit surveys and feedback obtained from faculty who taught students of both programs. The research claims that graduates of the program following the outcome-based criteria have acquired better skills as compared to the other program following input-based criteria.

Gonge and Ghatol (2014) assert the classification of the educational accreditation into three groups: primary educational accreditation, secondary educational accreditation and higher educational accreditation. They emphasize accreditation as a continuous process which should meet specific standards of quality required for education. However, their research focuses on the art of teaching in the learning process as an essential part for educational accreditation, quality, and assessment. This can be contrasted to paper-based accreditation processes that highlight the importance of collecting and analyzing data.

Abou-Zeid and Taha (2014) address the requirements of NCAAA, as well as the requirements of the Engineering Accreditation Commission of ABET. They discuss the challenges that arise during the preparation of the accreditation documents including the inadequacy of knowledge of the accreditation needs and requirements. In their results, the challenges faced during the accreditation process include the inability to properly prepare required forms and documents, lack of faculty commitment to the accreditation process, high faculty turnover, and lack of proper support from higher administration. They notice that differences of accreditation between programs and universities are not the problem; the readiness of the program



# THE ACCREDITATION DILEMMA: A CASE STUDY OF ADOPTION OF STRUCTURED WEB-BASED ACCREDITATION SYSTEMS IN SAUDI ARABIAN HIGHER EDUCATION ENVIRONMENT

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( Received 12 / 6 / 1435 H, Accepted for Publication 4 / 4/ 1437 H )

**Keywords:** Accreditation; Challenges of Accreditation Process; Web-Based Accreditation System; Saudi National Commission for Academic Accreditation & Assessment; NCAAA.

**Abstract.** The initiatives to embed quality assurance in Saudi Arabian educational system have emerged in the 1980's. Currently, the National Commission for Academic Accreditation & Assessment (NCAAA) is the quality-affirming authority that develops the accreditation standards and awards the accredited status in the Kingdom. Despite the positive expectations of the NCAAA quality process, it still includes a number of complications that need to be resolved. This paper discusses the barriers in the NCAAA accreditation process, focusing on the main problems in collecting data and developing the reports. The research is based on interviews with faculty and staff members involved in the accreditation work. The interviews show several problems in the current practices of the accreditation process including redundancy, decentralization of information, lack of expertise, and the underestimation of the time required for data gathering and reports formulation. The study suggests the implementation of a Structured Web-Based Accreditation System (SWAS) to address the challenges reported.

## 1- Introduction

The purpose of the National Commission for Academic Accreditation & Assessment (NCAAA) is to enhance the standards of educational practices and improve quality of post-secondary education in Saudi Arabia. The responsibilities of the Commission towards educational institutions are extensive. These include establishing standards, criteria, and procedures for academic assessment and accreditation as well as providing training for faculty and staff involved in the development of quality assurance systems (NCAAA, 2014).

In this respect, the Commission has created eleven standards for the major areas of operation in higher education. NCAAA standards for accreditation and quality assurance are established to be consistent with international benchmarks while relevant to Saudi Arabian requirements (NCAAA, 2014). The areas of these standards are mission goals and objective; program administration; management of program quality assurance; learning

and teaching; student administration and support services; learning resources; facilities and equipment; financial planning and management; employment processes; research; and relationships with the community. NCAAA standards are required to be addressed across the whole accreditation process with several levels of detail. There are general descriptions for each of the eleven major areas of activity, which are later broken down into sub-standards dealing with requirements within each of the major areas. Institutions have to provide a number of good practices that are carried out within each of those sub-standards.

Accreditation is asserted an effective way for Saudi universities to assess and improve quality of education (Sun Jing, 2007). Program accreditation, for example, is emphasized as an effective quality assurance mechanism that could serve a wide range of constituencies from the perspective of profession and society (Feisal, 2009). The growing interest in program improvement, and not just on meeting