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Administrative Model for Quality Assurance in a Maritime Institution: Response to Globalization

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Abstract - In response to the changing demands of globalization, this study developed an administrative model for quality assurance intended in a maritime institution and to determine the perceived levels of institutional domains and the impact of accreditation as influenced by respondent-related factors. This research employed a quantitative-qualitative mode of data collection. Stratified proportionate random sampling method was used in the selection of the final participants of this study, specifically the internal and external respondents. Results of the study showed the "very effective" and "very influential" perception levels of the following variables: institutional domains and impact of accreditation. The SWOT analysis and Swanson's Systems Model for Performance Improvement was utilized and yielded significant factors leading to the formulation of the administrative model.

Keywords - Administrative model, quality assurance, maritime institution

INTRODUCTION

Societies have historically become increasingly complex as they have evolved. This complexity holds true with the seafaring industry. It has been established by society to address social, economical, political, and educational needs of seafarers. In the global seafaring industry, the Philippines has been a major supplier of deck/engine officers and ratings on board. The following facts attest to the contribution of Filipino seafarers as far as global demand of officers and ordinary seamen in foreign ships is concerned.

Mitsunobe (1999) emphasizes that more than 193,000 Filipino seafarers today are working onboard foreign ships. This simply shows that seafarers play a major role in the country's economy. In 1998 alone, the Filipino seafarers remitted $1.6 billion out of the estimated $6 billion to the Philippine economy.

The report of Philippine Overseas Employment Administration (POEA) states that from 1984 to 2001, there was a yearly increase in the deployment of Filipino seafarers (R.A. No. 8042, (1995). It was further discussed in the study of Jaleco that the Philippines is recognized as the manning capital of the world. It supplies almost every vessel that sails the seven seas with Filipino marines and marine engineers on board (Jaleco, 2004). This is the reason why the Philippines is considered the biggest supplier of seafarers in the global market for the past several years.

However, according to the report of the Filipino Seafarers National Convention held at Manila last 2002, the world market is being threatened by the dominance of Eastern bloc countries and China as sources of seafarers. Many seafarers from Soviet bloc countries and China have accepted rate of even less than US$ 385 monthly salary, which is lower than Filipino seafarers' rate. This is an indication that the country's leadership in the seafaring industry, in terms of manpower base, is now being challenged in all areas. Its capability and commitment to sustain a steady supply of competent officers and skilled ratings are facing considerable burden. Another survey conducted by FAME (Filipino Association for Mariners Employment), showed that about 8, 300 jobs have been lost to other nationalities, mostly Chinese, over the past two years (R.A. No. 8042,1995). For Japanese beneficially-owned

vessels alone, about 800 jobs have been lost to China. In Star Cruises, the percentage of Chinese has dramatically grown from almost zero starting 1994 to 25% by 2001 while the number of Filipino crew has steadily decreased by 80% in 1994 to 2001. Competition from other nationalities like Indonesia, India, and Eastern European countries is also increasing (Querol, 2002). Moreover, Francisco gave the same observation on the prospects and contributions of the Philippines in the world's manning industry as shown in the following statements:

The bright prospects and the great contributions that the manning industry gives to the economic growth of the nation prompted other developing countries like Crotia, China, Vietnam, India, Myanmar, and even now Korea, to develop and strengthen their own seamen resource base (Francisco, 2000).

Moreover, Ho stresses in her paper about the competition observed in the global seafaring industry between the Philippines and other countries:

> *Our competitors from other Asian and Eastern European nations are working with great political will, and making substantial financial investments, in schools and training, to attract our customers away from us. These nations have seen how highly competent seafarers can secure gainful employment, and generate valuable foreign currency at the same time. They decided that they too can emulate the Philippines to develop their potential to take advantage of the same opportunity (Magsaysay - Ho, 2003).*

These problems in the global manning industry have an effect on the economic growth and dollar reserve of the country because seafarers contribute approximately US $ 2 billion foreign exchange to the country every year because of the magnitude of seafarers' contribution to the national economy they are regarded as "living heroes" of the Philippines in this millennium (Arcelo, 2000).

In order to address the burden of sustaining competent seafarers and skilled ratings, the Philippines has to comply with the policy set by STCW (Standard of Training, Certification and Watchkeeping) 1995. The said convention provides effective mechanisms for the enforcement of determining the quality of seafarers -- their education, training and certification. Quality is "conformance to mission specifications and goal achievement -- within publicly accepted standards of accountability

and integrity as stated by Bougue and Sanders" (Bouge and Sanders, 1992).

In relation to STCW, Mukerji (2003) explains further about designing the standard that results in principles under the Plan-Do-Check-Act (PDCA) cycle, consistent with the development of quality management systems under the International Standards Organization (ISO). It is the process that was employed to develop an education-specific ISO Standard, which satisfies the requirements of STCW.

In achieving quality education, training and certification, effective governance of the maritime institutions is needed. The Filipino seafarers' education and training should be ascertained (Lena, 2003). There should be a course of action to determine its effectiveness and responsiveness to the demands of the international seafaring industry. Can the training and education obtained by our Filipino graduates and seafarers compete with other seafarers worldwide? Training and education can be indicators and basis of the claim that Filipino seamen are trained and equipped with the necessary qualities, skills and knowledge, thus, effectively able to cope with the demands of the time and globalization in the maritime arena. Arcelo supports this by emphasizing the influence of education and training on maritime institutions:

> *The Philippine maritime education sector has been crucial in enhancing excellence and competitiveness of Filipino seafarers. Tracing the maritime school's contribution to the development of seafarers, a closer look at maritime schools is needed. It is believed that the educational emphasis of the 21st century is toward total quality management of education (Arcelo,2000).*

The valuable contributions of the education sector in complying with the requirements of the amended STCW Convention to boost the Philippines' bid to be included in the White List was also highlighted in the study of Salabas (2003). She explains that the "White List" refers to the List of Countries, which had matched or exceeded the requirements of the STCW '95 Convention. Seafarers who have certificates issued by countries that are not on the "White List" may have some problems obtaining employment with major supplying countries. International Maritime Organization (I.M.O.) certifies the internationally set

maritime standards (R.A. 8544, 1998). R.A. No. 8544 which is known as the Philippine Merchant Marine Officers Act of 1998 was enacted to promote and ensure the safety at sea, protect and preserve the marine environment and ecology, prevent marine pollution and accident at sea by complying with STCW'95. The Commission on Higher Education (CHED) also implemented the new and enhanced curricula (http://fun.pagecount.com/ent/mapl/82921>) for Bachelor's degree in Marine Transportation and the Bachelor's degree in Marine Engineering (Romero, 2000).

On this premise, administrators and planners in maritime institutions should be aware of the dimensions of the qualitative outcomes of the educational system. It is important to know the factors that would influence the quality, skills, and knowledge of students who wish and have potentials to become competent and effective seafarers.

Accreditation is basically a test of quality. Lacson stresses that accreditation is designed primarily to encourage and assist the institution to evaluate itself objectively, and the accrediting body to validate the institution (SEARCH: CSA Research Journal). It is an instrument of quality control.

Thus, the concern of this study is to design an administrative model to assure quality in a maritime institution, specifically the JBLFMU. This school is considered as the first maritime school in the Philippines to be accredited by the Philippine Association of Colleges and Universities - Commission on Accreditation (PACUCOA) with Level III accredited and reaccredited status for Maritime Education. Recently, JOHN B. LACSON FOUNDATION MARITIME UNIVERSITY is one of the top maritime schools certified by the Commission on Higher Education as having complied with the requirements of the International Maritime Organization (IMO). It is also the first and only school in the Philippines that has a maritime high school (http://www.geocities.com/pacuweb/links/guest.html>).

This study determined some institutional components and practices that would assure the same quality for effective teaching and learning in the institution. Hence, the need for this study.

OBJECTIVES OF THE STUDY

This study sought to develop an administrative model for quality assurance in JBLF-System and to determine the perceived levels of institutional domains and impact of accreditation as influenced by respondent-related factors. Furthermore, this study employed Strengths, Weaknesses, Opportunities, and Threats analysis (SWOT, in some of its parts). SWOT provides information that is helpful in matching the firm's resources and capabilities to the competitive environment in which it operates (http://www.QuickMBA.com.file) in relation to the perceived institutional domains and perceived impact of accreditation in designing the administrative model.

Specifically, the study included the following objectives:

1. to determine the level of the perceived institutional domains in a maritime institution: functional, programmatic, interpersonal, and contextual
2. to determine the level of the perceived impact of accreditation on the institution in the areas of faculty, faculty development, instruction, quality standards system, student – personnel administration, business administration, institutional planning and development, and research and development program
3. to compare the level of the perceived institutional domains in a maritime institution when the respondents are classified as administrators, faculty, students, and alumni
4. to compare the level of perceived impact of accreditation on the maritime institution when the respondents are classified as administrators, faculty, students, and alumni
5. to identify factors which significantly predict the institutional domains and impact of accreditation
7. to relate the level of institutional domains and level of impact of accreditation as perceived by the respondents
8. to describe the strengths, weaknesses, opportunities, and threats of the maritime institution in terms of institutional domains and areas of accreditation
9. to describe what administrative model is needed for quality assurance in maritime institutions, by utilizing the SWOT framework

Procedure for Designing an Administrative Model

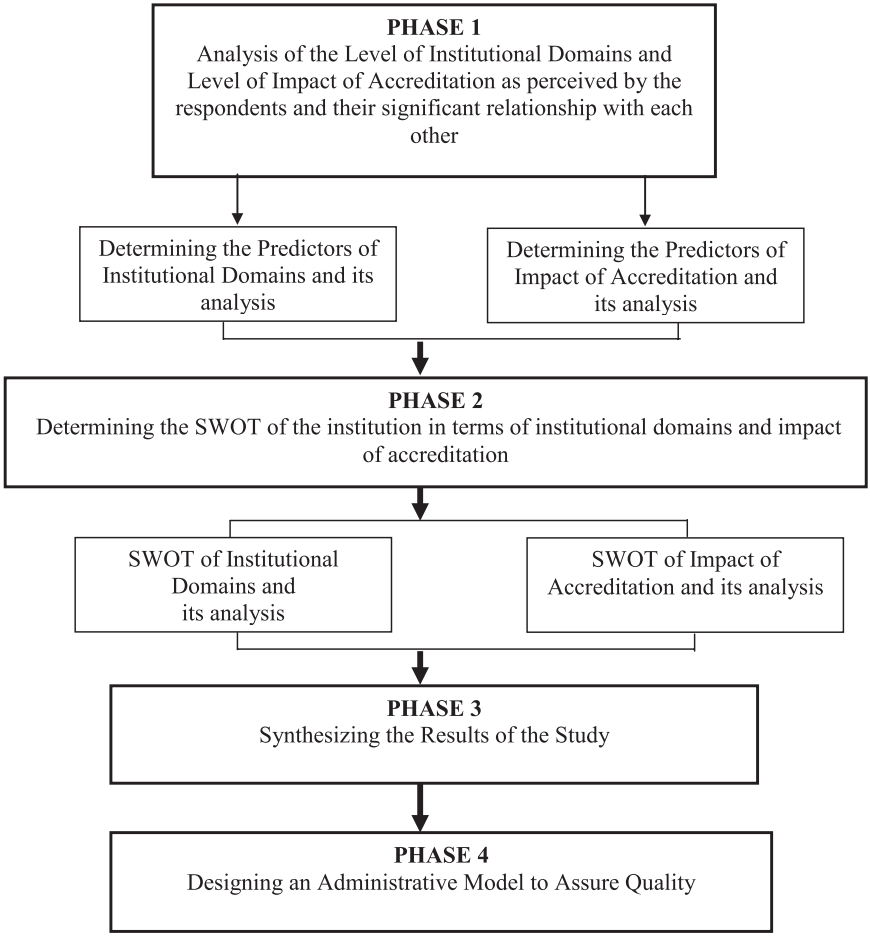

Figure 1. Flowchart for Designing an Administrative Model for Quality Assurance in a Maritime Institution

MATERIALS AND METHODS

The research employed a quantitative mode of data collection. Two Likert-type data gathering instruments were used to come up with the administrative model employing SWOT framework. The "Rating Scale for Institutional Domains," which was used to find out the level of perceived domains, and the "Rating Scale on the Impact of Accreditation" were also utilized to ascertain the level of impact of accreditation.

The results of this present study were determined by the descriptive analyses through the use of frequency (f), percentage (%), averages or means (Ms), standard deviation (SDs) and their corresponding interpretations.

For inferential analyses, t-test, ANOVA, Pearson's r, and Multiple Regression Analysis enter method were employed in this investigation. The significant level was set at .05 alpha for two-tailed tests.

Statistical analysis of the data was determined by the use of the two data-gathering instruments using rating scales on institutional domains and impact of accreditation.

RESULTS AND DISCUSSION

The following are the findings of the present study: The level of perceived programmatic domain, interpersonal domain, and level of perceived contextual domain was "very effective." However, the level of perceived functional domain in the institution was "effective."

The level of the perceived impact of accreditation of the institution on the areas of faculty, faculty development, instruction, quality standard system, student personnel administration, institutional planning and development, and the area of research development program was "very influential." However, the level of perceived impact of accreditation on the area of business administration (financial governance) was "influential."

There was a significant difference in the level of institutional domains when respondents were classified according to administrators, students, and alumni. No significant difference existed when respondents were grouped according to faculty.

There was significant difference in perceived impact of accreditation in the institution when the respondents were classified according to students, and alumni. No significant difference existed when respondents were grouped according to administrator and faculty.

The students and alumni were significant predictors of institutional domains.

The students and alumni were significant predictors of the impact of accreditation.

There was a positive significant correlation that existed between institutional domains and impact of accreditation.

The strengths of the institution in the institutional domains were identified as the following: "good in planning especially in addressing STCW standards", "school culture for excellence and competences, professionalism of the instructors and staff," "innovative teaching and classroom management, strategic vision of school, laboratory activities and simulation, linkages of the school, philosophy of school like discipline, honest, hard work." However, the weaknesses identified are the following: "weak collaboration and coordination of task with regard to different units," "inconsistency of school policies" and "late dissemination of information and decision."

The opportunities of the institution in terms of institutional domains were the following: "the placement program of the institution and linkages," "international recognition of the institution," "qualification and expertise of the faculty" and "competency program and assessment."

The threats were identified by the external respondents as the following: "standards required by shipping companies," "poor attitudes of graduates toward work," "selected negative Filipino culture," "nature of the maritime curriculum," and "support of government to maritime education and training of Eastern European countries and China."

On impact of accreditation, the strengths identified in the study were the following: "shipboard training activities of the students," "quality standard system of the school as recognized by international certifying body," "leadership and officership," "training in school," and "professional upgrading of faculty and staff."

The weaknesses identified were the following: "poor participation in the planning of budget of faculty, staff, and students" and "problem in prioritizing of projects and programs with respect to annual budget."

The opportunities reflected in the study were the following: "advanced shipboard training and computerization," "more opportunities for students to develop their leadership potentials," "professional upgrading of faculty and laboratory assistants," and "postgraduate studies of the faculty and staff in their fields of specialization."

The threats identified were the following: "problem of participation in the planning process of different entities in the academic community -- faculty, staff, administration, and students," "requirements for the upgrading of the salaries of teaching and non-teaching personnel," "problem of allocation of resources" and "prioritization of various objectives and policies."

The administrative model utilized Richard A. Swanson's "Systems Model for Performance Improvement" modified by the researcher to fit the new model considering the different components: SWOT, Institutional Domains, and Impact of Accreditation.

SWOT Analysis Matrix of Institutional Domains

INTERNAL FACTORS/ EXTERNAL FACTORS	STRENGTHS	WEAKNESSES
	• good in planning especially in addressing STCW standards • school culture for excellence and competency • professionalism of the instructors & staff • innovative teaching & classroom management • strategic vision of school • laboratory activities & simulation • linkages of the school • philosophy of school like discipline, honest, hard work	• weak collaboration & coordination of task with regard to different units of JBLF-System • inconsistency of school policies • late dissemination of information & decision
OPPORTUNITIES	**O-S STRATEGIES**	**O-W STRATEGIES**
• placement program of school and linkages • international recognition of school • qualification & expertise of the faculty • competency program & assessment	• the school has to consider the inputs and participation of alumni who have been on board for quite a length of time • the school has to sustain the international recognition, linkages and standards of education and training through on-going seminars, up-grading, and continuing education of faculty and staff • philosophy of school for excellence in maritime education & training has to be maintained	• the school has to conduct seminars on team building and values orientation regularly among department heads, faculty members and students • school has always encouraged all members of the academe to participate in planning, feedbacking, and consultation
THREATS	**T-S STRATEGIES**	**T-W STRATEGIES**
• different standards required by shipping companies • poor attitudes of graduates toward work • selected negative Filipino culture • nature of the maritime curriculum • support of government in maritime education & training of Eastern European countries & China	• the school has to maintain & improve its linkages and standard • school has to conduct job and work orientation among graduates in order to appreciate their profession • networking with the different shipping companies and updating of standards.	• The school has to initiate feedbacking from shipping companies regarding new trends, standards and performance of the graduates • Committee on Curriculum Review has to look into and examine the coherence and relevance of maritime curriculum with the global changes and challenges in the seafaring industry.

SWOT Analysis Matrix of Impact of Accreditation

INTERNAL FACTORS/ EXTERNAL FACTORS	STRENGTHS	WEAKNESSES
	• shipboard training activities of the students • quality standard system of the school as recognized by international certifying body • leadership and officership training in school • professional upgrading of faculty and staff	• poor participation in the planning of budget of faculty, staff, and students • problem in prioritizing of projects and programs with respect to annual budget
OPPORTUNITIES	**O-S STRATEGIES**	**O-W STRATEGIES**
• advanced ship board training & computerization • more opportunities for students to develop their leadership potentials • professional upgrading of faculty & laboratory assistants • post graduate studies of the faculty & staff in their field of specialization	• the school has to continue the accreditation/ certification of the quality standard system through international accrediting agencies like Det Norske Veritas (DNV), American Bureau of Shipping (ABS), and Anglo Japanese American (AJA) • school has to provide leadership training, seminars, and workshop to develop the leadership potentials of students that will help them to become good, competent, and skilled officers and gentlemen	• school has to see to it that students, faculty, and staff are involved in the planning process • feedbacking in the budget & academic performance of all units shall be done regularly • the school has to provide scheme for upgrading the salaries of teaching and non-teaching staff
THREATS	**T-S STRATEGIES**	**T-W STRATEGIES**
• problem on participation of different entities in the academic community-faculty, staff, administration, and students in the planning process • requirements for the upgrading of the salaries of teaching and non-teaching personnel • problem in the allocation of resources and prioritization of its various objectives and policies	• the school has to encourage participation of individuals concerned in planning and budget feedbacking • information officer shall be needed • school has to conduct seminar on budget preparation and project prioritization	• the school has to conduct regular seminar on "team building", "budget preparation and prioritization", "orientation on policies and procedures for professional upgrading • the school has to provide scheme for the upgrading of salaries of teaching and non-teaching staff

Administrative model for quality assurance. The administrative model needed to assure quality in the maritime institution utilizing the SWOT framework was done by presenting the two major parts: (1) synthesis of the different components leading to the design of the administrative model, and (2) the presentation of the administrative model patterned after Richard Swanson's System Model for Performance Improvement (Swanson, 1999).

Administrators play a vital role in the maintenance of quality in their respective academes through conduct of particular quality measures other than those set by accrediting bodies and foreign shipping companies.

The diagram in Figure 2 shows the interrelationships of the components considered in the designing of the administrative model to be used by administrators in maritime institutions.

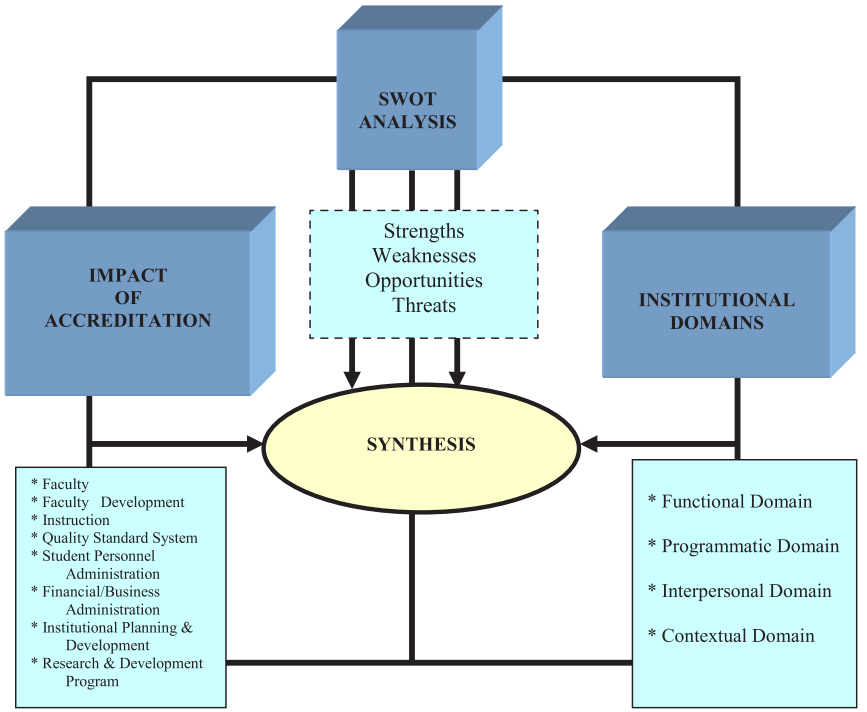

Figure 2. Synthesis of the different components

To design the model for administrators in maritime institution, Swanson's Systems Model for Performance Improvement was utilized. This is designed primarily for use in corporate environments. However, the researcher believes this appropriately suits the educational setting. This model is based on the premise that system's theory, systematic performance diagnosis, and systemic documentation of expertise are powerful means of dealing with complex performance issues (Finch and Crunkilton, 1999).

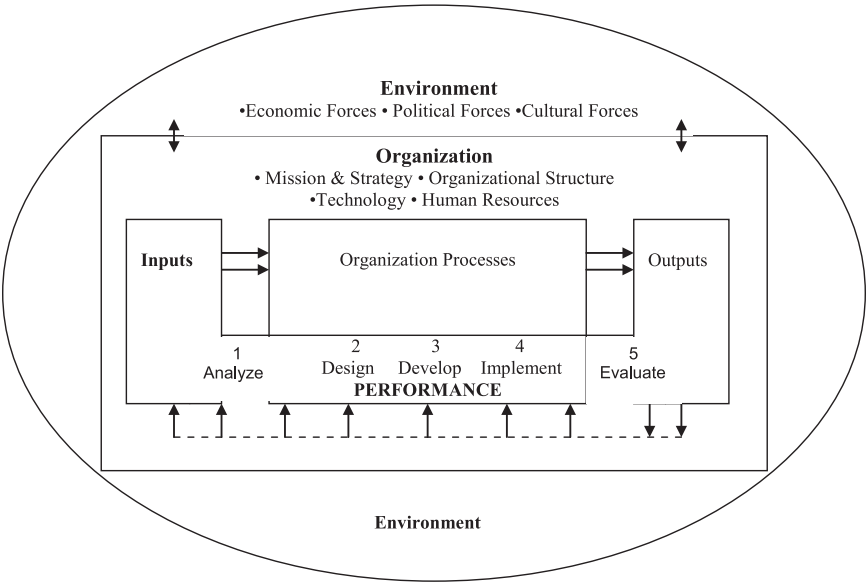

Figure 3. Systems model for performance improvement

Source: Richard Swanson's Analysis of Improving Performance 1994 (cited from Finch and Crunkilton, 1999)

The administrative model design is a modified framework of Swanson's. The researcher however considered the important components advanced earlier in this research.

The environment stands for the context of the whole institution where the proposed administrative model has to take effect.

The organization is the maritime university and all its components: Mission, Vision, Goals, and Objectives as well as human resources: Administrators, Faculty, Students, and Alumni.

The inputs refer to the institutional domains assessed and the impact of accreditation.

The organization processes are the SWOT, and the synthesis of these different components.

The output is the administrative model to assure quality in the institutions' overall performance.

The researcher considers all the components involved in this inquiry in the formulation of the administrative model to assure quality in institutional performance. Below is the administrative model designed by the researcher modified from Swanson's framework.

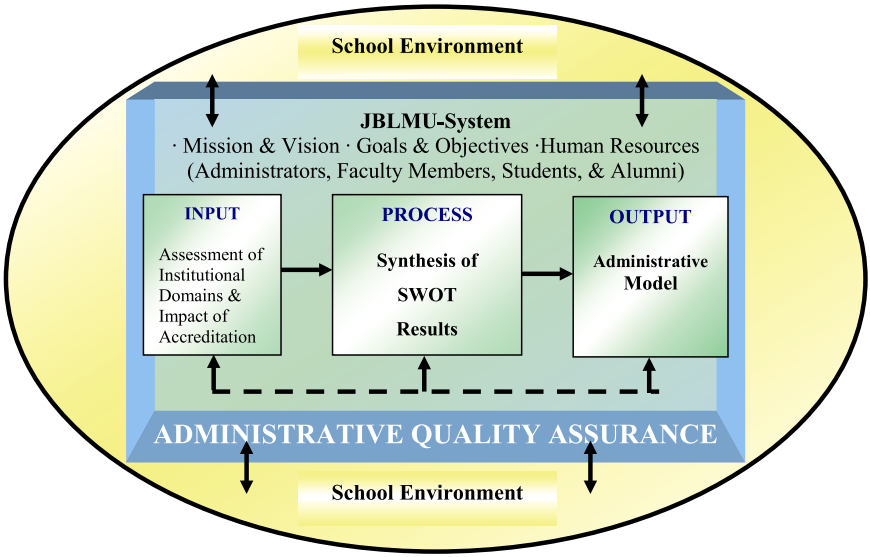

Figure 5. An administrative model for quality assurance

CONCLUSIONS

Based on the findings of this study, the following conclusions are presented: The level of perceived institutional domains of the maritime institution is very effective. Despite the constraints experienced by the faculty and students in the school environment, this research yielded a favorable response from them.

The level of perceived impact of accreditation is very influential. An observed coherence in the processes within the institution appears to be evident as indicated by the respondents' favorable response.

There is significant difference that exists in the level of institutional domains when respondents are classified according to administrator, students, and alumni and no significant difference existed when respondents are grouped according to faculty. The faculty, having been exposed to the intricacies of the curriculum experience, impliedly made an objective and collective view regarding the matter. Their homogeneity is inherent in the results shown.

There is significant difference that exists in the perceived impact of accreditation when the respondents were classified according to students, and alumni and no significant difference exists when respondents are grouped according to administrator and faculty.

The students and alumni are significant predictors of institutional domains. As actual components in the institutional domains, they are realistically involved in the overall affairs of the institution, thus, the significance.

The students and alumni are significant predictors of the impact of accreditation. Student and alumni involvement in the accreditation process appear to be relevant as far as the results are concerned.

There is a positive significant correlation that exists between institutional domains and impact of accreditation. This is not surprising considering the fact that a successful institution must have a coherent program. That is, the different areas in the accreditation process and the institutional domains must be interrelated to ensure efficiency in output.

The consolidated strengths of the maritime institution in terms of institutional domains are "good in planning especially in addressing STCW standards," "school culture for excellence and competency,"

"professionalism of the instructors and staff," "innovative teaching and classroom management," "strategic vision of school," "laboratory activities and simulation," "linkages of the school," "philosophy of school like discipline, honest, hard work." However, the following weaknesses were identified: "weak collaboration and coordination of task with regards to different units of the maritime university," "inconsistency of school policies," and "late dissemination of information and decision."

The consolidated opportunities in terms of institutional domains are: "placement program of school and linkages," "international recognition of school," "qualification and expertise of the faculty", "competency program and assessment." However, the threats as identified by the external respondents are: "standards required by shipping companies," "poor attitudes of graduates toward work," "selected negative Filipino culture," "nature of the maritime curriculum," "support of government in maritime education and training of Eastern European countries and China."

On the impact of accreditation, the consolidated strengths are: "shipboard training activities of the students," "quality standard system of the school as recognized by international certifying body," "leadership and officership," "training in school," and "professional upgrading of faculty and staff." The highlighted weaknesses are: "poor participation in the planning of budget of faculty, staff, and students," and "problem in prioritizing of projects and programs with respect to annual budget."

The consolidated perceived opportunities in terms of impact of accreditation are: "advanced shipboard training and computerization," "more opportunities for students to develop their leadership potentials," "professional upgrading of faculty and laboratory assistants," and "postgraduate studies of the faculty and staff in their field of specialization."

The consolidated threats are the following: "problem of participation of different entities in the academic community-faculty, staff, administration, and students in the planning process," "requirements for upgrading of the salaries of teaching and non-teaching personnel," and "problem of allocation of resources and prioritization of its various objectives and policies."

An administrative model is proposed, patterned after Swanson utilizing the different components considered by the researcher: the SWOT as manifested in the institutional domains, and the impact of accreditation.

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