

TOTAL QUALITY MANAGEMENT IN MARITIME UNIVERSITY: PHILIPPINE MODEL

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ABSTRACT

The shift to knowledge economy brings education back to the hub of human empowerment. The present age brings into play the key elements of education and training in the global dimension. Expectedly, learning institutions must facilitate the development of knowledge and skills vital for global competitiveness. Higher education is thus continuously challenged to be more responsive to the current demands and be efficient and effective in the implementation of all aspects of operation. To date, the paradigm of education directs its system to align institutional goals and objectives to the world's standard. This changing pattern gives rise to the concept of quality as an inherent component of success. Since the quality of education is appraised by the very same individuals it produces, learning institutions must take a holistic view of quality. Among maritime schools, whose main goal is to produce technical manpower for global seafaring market, quality is not an option but a mandatory requirement should they aim for "world-class" status. In addition, STCW '95 stresses the need to fortify the state of affairs of maritime schools and training institutions to ensure the development of competent manpower.

The John B. Lacson Foundation Maritime University (JBLFMU), the only maritime university in the Philippines, has pioneered adherence to ISO standards in the country and in Asia. The only maritime school to implement the Philippine adaptation of the Malcom Baldrige Education Criteria for Performance Excellence, the JBLFMU is among the three learning institutions in the Philippines serving as benchmark for the practice of total quality management.

This study highlights the implementation of TQM in the JBLFMU's operation in the areas of leadership; strategic planning; student stakeholder and market focus; measurement, analysis, and knowledge management; faculty and staff focus; and process

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management in relation to organizational approaches, deployment of approaches, and organizational results.

Keywords: total quality management, maritime training and education, Malcom Baldrige Education Criteria for Performance Excellence.

INTRODUCTION AND BACKGROUND OF THE STUDY

Serving as intermediaries between the needs of an academically qualified workforce and the requirements of the industry, higher education institutions (HEI's) have to find ways to generate graduates armed with skills and competencies demanded by the global market; thus, schools must aim for world-class status through high-quality delivery of educational services. Consequently, globalization of education makes the quest for quality no longer an option but an essential requirement.

This research was linked with the management theory advanced by Deming and Juran (1954), known as the Total Quality Management (TQM) or the Continuous Quality Improvement (CQI). Goetsch and Davis (1995) clearly delineate the theory as follows:

The TQM consists of continuous improvement activities involving everyone in the organization - managers and workers - in a totally integrated effort toward improving performance at every level.

As an administrative approach, the TQM is geared towards long-range success through customers' satisfaction. Its key elements include ties to an institutional plan, employee empowerment and teamwork, continuous improvements, collaborative work, and the use of a scientific approach to process analysis. This philosophy expounds that improving quality improves customer satisfaction which, in turn, improves institutional performance.

The John B. Lacson Foundation Maritime University (JBLFMU) is an institution that provides high-quality maritime education and supplies world-class maritime manpower to the global shipping market. The JBLFMU is acknowledged as among the few standard bearers of maritime education and training of excellence in the Philippines and in the world. It has established competitive advantage through continuous organizational improvement and innovations.

With the TQM or CQI serving as guide, this research employed the Education Criteria for Performance Excellence of the Philippine Quality Award (an adaptation of the Malcolm Baldrige Education Criteria for Performance Excellence) as a systems approach for appraising the JBLFMU's organizational performance management. The criteria includes such elements as leadership; strategic planning; students/ stakeholders focus; measurement, analysis and knowledge management; faculty/staff focus; process management; and the dimensions of approach, deployment and results. These criteria

help organizations use an aligned approach to organizational performance management that results in delivery of ever-improving value to students and stakeholders, improvement of overall organizational effectiveness and capabilities and organizational and personal learning (Black, 2002).

The JBLFMU was thus presented in this study in the light of the Malcolm Baldrige Education Criteria for Performance Excellence, underscoring the best practices in its implementation of total quality management.

THE ORGANIZATION

The JBLFMU, initially established in 1931 by Capt. Juan Bautista J. Lacson as a review school for the upgrading of marine officers, has evolved from being a non-stock corporation (1948-1957) to a foundation (1985-present). The school has likewise undergone change in name from Iloilo Maritime Academy (1938-1953) to Iloilo Maritime Academy and Lacson Vocational Institute (1954-1958), Iloilo Maritime Academy (1959-1984), John B. Lacson Colleges (1985-1992) and John B. Lacson Foundation System (1993-2007) and now the John B. Lacson Foundation Maritime University, the first maritime university in the Philippines.

Dynamic, innovative and visionary in its pursuit of excellence in maritime education and training, the JBLFMU is the first maritime institution to earn Level III re-accredited status in the Philippines and among the 30 fully autonomous colleges and universities in the country. It is the first DNV-certified maritime school in the Philippines and third in Asia to be ISO-certified; first to publish a Maritime education Review; first to establish a maritime high school in the country; and first to be granted the Expanded Tertiary Education and Equivalency Program (ETEEAP) for Maritime Education.

Among the first three educational institutions awarded the Philippine Quality Award for Management Excellence in 2005, the JBLFMU is a member of the Phi Delta Kappa, an international association of professional educators, and is among the organization's key chapters in the world.

The JBLFMU is the Graduate Center for Maritime Courses of the Fund for Assistance to Private Education (FAPE) and the Regional Assessment Center for Deck/Engine ratings.

The JBLFMU includes three campuses: the JBLFMU-Arevalo and the JBLFMU-Molo, both in Iloilo City; and the JBLFMU-Bacolod in Bacolod City.

The mandate of the JBLFMU as an educational institution emanates from the Board of Trustees (BOT) and the Executive Council (ExCon). The Board, headed by the Chief Executive Officer, is the top policy making body; the ExCon, is the top management committee. Members of the ExCon are the unit administrators, the internal auditors and the legal counsel. A collegial body, the ExCon is vested with the general management of the university.

Basically customer-oriented, the JBLFMU takes as top priority the satisfaction of its students and other stakeholders. Its focus as maritime education and training institution is giving the country a competitive edge in the world maritime manning industry which acknowledges the Philippines very significant 25% share of the world's seafarers.

EDUCATION PROGRAMS AND SERVICES

The specific subject of this research was the JBLFMU-Arevalo (JBLFMU-A), one of the three academic units of the University. The mainstream of the JBLFMU-A student segment is the Bachelor of Science in Marine Transportation degree program. Covered by a four-year residency program, which consists of a three-year academic study and a year's apprenticeship training on board local inter-island or international commercial vessels, the academic program is principally designed for education and training of future deck officers. The Seaman's Rating Course is a sub-student segment guided by a one year competency program and a two-month on-board training. Its primary purpose is to develop deck skilled seafarers' rating. The JBLFMU-A also runs a Graduate School which offers maritime-related master's, doctoral and management-level courses.

The academic curricular programs include courses that are systematically sequenced and designed to meet the needs of diverse sectors in the maritime industry. They are in accordance with the enriched competency-based curriculum as per IMO and government guidelines. The curriculum provides a balance between academic excellence (with emphases on science, mathematics and English) and applied skills.

Delivery of instruction incorporates learner- centered approaches and hands-on learning through the use of state-of-the-art maritime simulator; computers; laboratories in natural and applied sciences, languages and maritime communication; and internet services. Providing authentic exposure to students, the school maintains a mock ship and a mock bridge which are realistic replications of the facilities on board ships.

Formal preparation for apprenticeship training is made by exposing students to the real ship environment by means of a seven-day navigational trip onboard domestic vessels. This is a major component of the three-year academic study to earn the BSMT degree and to eventually become a deck officer. The students' academic performance is evaluated by an independent academic assessment office through a multi-layered system.

ORGANIZATIONAL CULTURE

The learning environment for the holistic development of globally competitive but nationalistic graduates is deeply rooted in and anchored on the JBLFMU culture of quality education, training and instruction. Armed at producing world-class technical and professional maritime manpower, its advocacy of ethical standards is manifested by its undertakings which address environmental and community concerns.

In its continuous pursuit of excellence, the JBLFMU undergoes both required and voluntary accreditation. Findings vital to improvement undertakings include: (a) the Norwegian International Ship registry's marked preference for scholars from the JBLFMU to those from other schools; (b) Norway's ODJFELL Shipping's firm resolve to hire only cadets from the JBLFMU; (c) sustained placement of JBLFMU scholars in the different shipping and manning firms despite sporadic economic slumps; (d) JBLFMU's strict conformance with government requirements; (e) the JBLFMU's higher national board exam passing percentage than the national rate (average national passing percentage in 2006 was 47.61%; JBLFMU's average passing percentage in the same year was 64.66%); (f) constant income increase due to regular enrolment growth; and (g) continuous faculty and staff educational upgrading.

As a maritime institution, the JBLFMU-A adheres to the policies, standards, guidelines and safety requirements of regulatory government bodies and the IMO.

MAJOR TECHNOLOGIES, EQUIPMENT, FACILITIES

The JBLFMU-A strategically sits along the shoreline of Guimaras Strait on a 2.9 hectares land area. Its location is most suitable for maritime training. Aside from the required facilities for a learning institution, the institution also boasts of updated and upgraded maritime-related laboratories and services as well as instruction-enhancing audio-visual and other electronic equipment. An office takes charge of the production of audio-visual and CBT materials.

In conformance with requirements, the University has RADAR, ARPA, ECDIS, GMDSS simulators and Liquid Cargo Handling simulator to enhance instruction and learning. The simulators are handled by instructors and assessors with appropriate training and certifications. Also available are the Automatic Identification System (AIS) and a Ship Security Alert System (SSAS).

Equipment and apparatuses are maintained according to manufacturers' instructions. Maintenance records are properly kept and regularly updated.

A Local Area Network (LAN) linking all offices is in place to facilitate faster and more convenient processing of data like the automated enrollment system which encompasses accounting, cashiering, and registration procedures. Further, it makes the

students' grades, research abstracts and other information available for immediate perusal at the internet via the school's website www.arevalo.jblcf.edu.ph. The LAN has also automated the recording of the faculty and staff's entry and exit recording.

ORGANIZATIONAL DIRECTION AND THRUSTS

The JBLFMU is challenged to meet the demand of the global market for the supply of qualified workforce. With this challenge comes the institution's continuous improvement of its priority thrusts: (a) enhance employment of graduates; (b) productivity development; (c) student development and productivity; (d) faculty/staff productivity; (e) management enhancement; (f) curricular enhancement and innovation; (g) technology development; and (h) meeting the challenge of competitors.

LEADERSHIP

The JBLFMU-A has always adhered to, adopted and employed the consultation and participation models of management as it directly addresses the vital need for lower-ranking personnel to participate in planning and decision making.

Depending on necessity, urgency and other situational factors, the JBLFMU employs tried-and-tested participation style alternatives. Often, the administrator, department heads, faculty and support personnel meet as a group, freely share information and, as an entire collegial group, make decisions.

Its top management, the ExCo, regularly meets twice a month but holds special meetings for urgent concerns.

The ExCon's recommendations are submitted to the BOT for approval during its regular monthly meetings. Items approved by the Board are disseminated among all units and departments for implementation.

The guiding management principle of JBLFMU is shown in Figure 1.

Short-term and long-term institutional plans prepared by the administrator and the department heads, are anchored on the school's vision, mission, quality policy, goals and objectives. Prior to the start of the school year, the deans, in collaboration with the academic department heads, prepare the Academic Plan. All plans are based on data gathered through internal scans among the faculty, staff and researchers and through external scans among the students, regulatory and accrediting bodies, shipping and manning agency, and other sectors concerned. The plans are submitted by the administrator for the ExCon's recommendation and for the BOT's approval.

Curricular proposals, revisions, modifications and other changes are collaborative efforts among the deans, academic department heads and faculty in coordination with

the students, alumni, regulatory and accrediting agencies shipping and manning agencies, and other stakeholder. Curricular concerns are officially forwarded by the administrator to the Academic Council which, in turn, endorses them for the ExCon's recommendation for approval by the BOT.

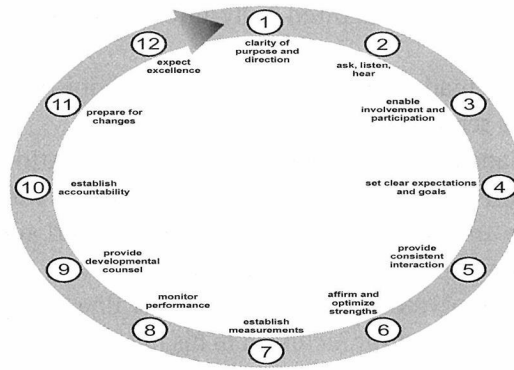


Figure 1. Management Principle

An annual management review, as provided in the Quality Management Manual SIV, is conducted to determine and analyze the current status of the institution in terms of accomplishments and opportunities for improvement as well as its policies –to ascertain the institution's continuous improvement. Other related activities include the continuous improvement request (CIR); quality management audits, academic and financial audits; and accreditation. To validate all these, the institution conducts periodic surveys among students, service providers and other stakeholders to draw suggestions, recommendations and other related data exigent to institutional improvement efforts.

Appropriate communication is disseminated to internal stakeholders regarding improvement plans for the learning-centered processes and the operation as a whole through management reviews, consultative meetings, and memoranda. The survey method, feedbacking system, correspondence and telecommunication are employed to communicate with external stakeholders.

The school's feedback mechanism draws strength from its explicit inclusion in the QM Manual which lucidly delineates the treatment and response procedures for feedbacks from various stakeholders and other sectors.

The Quality Management System of the institution is emphatic on the faculty and non-teaching personnel's role and participation in organizational development; thus, they are actively involved in feedback activities, post-activity surveys and evaluations.

GOVERNANCE AND SOCIAL RESPONSIBILITIES

As a formal educational institution, the JBLFMU-A is governed by government laws, policies, rules and regulations as well as the requirements of international monitoring and evaluating groups and organizations in the industry. This has brought beneficial results to the institution as an accredited, fully autonomous and ISO certified maritime university.

Financial control is made possible through the administrator's submission of the proposed budget for a school year for the BOT approval.

A three-tiered financial audit reviews the financial operations of the school. Audit is first conducted by the Accounting Office, then verified and validated by the JBLFMU Internal Auditor who ensures that accepted accounting and auditing procedures are observed. Verification and validation are done twice a year and an annual external audit is conducted by a private auditing firm. A daily financial performance report is submitted to the administrator for inclusion in his monthly report to the BOT.

STRATEGIC PLANNING

The JBLFMU-A establishes its strategic objectives through a focus on the accomplishment of its mission and vision, reflective of the standards set by authorized agencies in the maritime industry. Target goals are made every semester after evaluation processes are implemented and multi-sectoral feedbacks are brought in as input prior to planning. Thus, a continuous improvement effort is in place to serve the stakeholders.

A long-term five-year development plan outlines the activities for the accomplishment of objectives and goals. Short-term academic plans, training plans and action plans are accomplished in a year's time.

To accomplish the plans, budgetary allocations are made based on a forecast and approval of expected expenditures for equipment, facilities and services.

Information gathered from internal and external stakeholders identifies the institution's strengths, weaknesses, opportunities and threats. Data received from the evaluation, assessments and reviews serve as bases for the modification of strategic objectives and organizational goals as well as reference for the update of curricular programs.

The department heads' and students' evaluation of the faculty and of the staff are analyzed to determine their training needs for performance and productivity improvement. The efficiency of the operational system is also subjected to analysis to facilitate ease in achieving target goals.

Accreditation and internal audits assure the proper maintenance of facilities and equipment for efficient institutional performance and productivity. Educational reforms and major shifts in technology, student and community demographics, markets, com-

petition or the regulatory environment move the institution to adopt certain measures to adjust to an ever-changing society and the intricate developments in the industry.

Measures include curriculum revision and allocation of resources for purchase of equipment and expenses for marketing and training. The development plan follows a modification process as needs arise.

The curriculum is modified to meet the demands of the market through the integration of reforms in the course offerings.

STRATEGY DEPLOYMENT

The JBLFMU-A uses a systematic approach for strategic development of objectives, which utilizes inputs from both internal and external stakeholders in the maritime industry, particularly maritime education and training institutions. Results of reviews, assessments, evaluations and surveys are presented as relevant data for the development of objectives, which are incorporated in the institutional plans.

Student learning and faculty development outcomes are given adequate and appropriate emphasis. Learning outcomes are identified and evaluated. Careful analysis is made to establish a need for improvement of the curriculum or instructional approaches. The school offers scholarship grants for the professional advancement for the faculty and non-teaching staff.

To ascertain conformance with institutional goals and objectives, monthly departmental reports are submitted to the administrator. The year-end review of plans for the outgoing year serves as an opportunity for a critical estimate and discussion of why some plans succeeded while others faltered. Most unaccomplished plans are considered, as a whole or in part, for re-implementation.

STUDENTS, STAKEHOLDERS AND MARKET FOCUS

The Students' Manual and the Employees' Manual clearly delineate the school's policies and regulations as well as the students' and personnel's rights and obligations. The QM Manual, on the other hand, is a documentary demonstration of the institutional procedures to be observed and specifies the personnel's work descriptions.

To train the students in responsible and committed leadership and governance, the school promotes and encourages active participation of the Student Executive Council in certain school affairs, particularly those directly concerning the students. The school has institutionalized the students' representation in the Unit Management Review. Also

duly recognized are various student clubs and organizations which are vigorously involved in community outreach and extension activities.

The JBLFMU-A Admission Board sets entry requirements based on government and regulatory guidelines as well as develops and implements mechanisms in introducing school offerings and marketing programs to feeder schools and other student providers.

Promotional campaigns include radio and television advertisements; career orientation program for secondary school students; and campus tour familiarization activities.

The JBLFMU-A's market segment stretches nationwide as the institution caters to students coming from the different regions of the country.

COMPLAINT AND FEEDBACK MECHANISM

The school encourages student feedbacks regarding both curricular and non-curricular concerns during the annual management review. During the Management Review, an internal scan is conducted to gather feedback and information from students. The results are collated by the Guidance Office and submitted to the Quality Assurance Manager for analysis and deliberation with the departments concerned.

Verbal complaints about curricular, co-curricular and related matters from students and stakeholders are accepted and recorded, stating the person or office directly affected by the complaint, and submitted to the Conduct Board.

The Conduct Board, chaired by the Dean of Maritime Programs, is tasked to hear cases of students brought before it in view of their violations of government and school rules and regulations and recommends corresponding penalties and similar measures. The Board strictly observes due process of law in the discharge of its functions.

MEASUREMENT, ANALYSIS, AND KNOWLEDGE MANAGEMENT CURRICULAR ASSESSMENT PROCEDURE

The JBLFMU-A, being an educational institution, is concerned with students' scholastic performance. Data, in this regard, are generated from the students' scores in short quizzes, long periodic tests, class participation, and curricular papers and projects. All student performance data are collected, analyzed, evaluated and integrated by the Academic Assessment Office (AAO). Major examinations are checked using the Computer Optical Scanner for faster and more accurate results.

To supplement student performance data, semestral evaluation of faculty, courses offered, and laboratory facilities and equipment is conducted among the students by the Academic Committee (AC).

The results point out curricular strengths and weaknesses in terms of classroom instruction, degree programs and student learning and serve as bases for remediation or innovative interventions.

The multi-layered quality of assessment and academic audit system ensures the high quality of graduates and sets forth a very effective tool for identifying proficiencies and deficiencies among both faculty and students as well as for the immediate establishment and implementation of adequate and appropriate remediation.

Recognized as one among the best maritime school in the Philippines, the JBLFMU-A takes a proud stand and enjoys a very certain and confident edge over other similar institutions as reflected by the positive feedbacks from local and international shipping companies and manning agencies as well as by its graduates' constantly outstanding performance in the board examinations. Also noteworthy is the institution's continuously increasing industry linkage and sponsoring companies.

The internet keeps the school regularly updated with the latest trends and innovations in performance measurement and evaluation, such as the use of portfolio, walk-in assessment, on-line verification of competencies and other learner-centered procedures. Journals and other publications of shipping and manning establishment, are also a great help with their comprehensive reports on outstanding processes and performances among maritime institutions.

The JBLFMU-A's best practices and achievements serve as vital comparative data or information upon which innovation plans are anchored. Its organizational status scanning is made relative to the performance of similar institutions. This comfortably facilitates analysis, comparison and adoption of processes and procedures which best fit the organization. It further provides opportunities to fill in performance measurement gaps and select appropriate alternatives as well as make practicable projections and employ necessary interventions to effect improved programs and services.

Data are updated through maritime conventions and fora which usually delineate the latest trends, issues and concerns in maritime education and in the maritime industry. Such events are graced by experts both from the government sector who, in view of their professional work and position, are the best sources of first-hand maritime-related information.

The JBLFMU-A shares relevant research-based information and data with its various stakeholders through their publication in research journals and availability on-line. An annual research colloquium for students likewise serves as venue for sharing best practices based on empirical data.

Due to the immense and comprehensive organizational data amassed at rapid pace by the JBLFMU information system, electronic processing is of imperative and indis-

pensable value. The institution's electronic data system has made acquisition, preservation, retrieval and release of scholastic and other organizational data efficient, easy, convenient and fast, resulting in significant cost-cutting in terms of time, effort and money as well as in ultimate satisfaction among students, faculty, support personnel and other stakeholders.

FACULTY AND STAFF FOCUS

The institution has a strong faculty and staff profile. Of its 209 employees (SY 2006-2007), 44 % belong to the faculty group; 56 %, administrative staff. Among the faculty are general education instructors (51%) and professional instructors (49%). General education instructors are specialists in Mathematics, Natural Sciences, Language, Physical Science, and Social Sciences. Twenty percent (20%) of the general education faculty are holders of doctoral degrees; 24% have master's degrees; and 17% have bachelor's degrees and pursuing their master's degrees. Professional instructors are marine deck officers, 67% of whom have master's degrees; and 33% have bachelor's degrees with master's units.

The faculty and staff's educational and skills enhancement needs are determined and appraised before the start of every school year. The Human Resource Management Office, in consultation with the department heads, identifies the faculty and personnel with urgent need to pursue appropriate graduate degrees or to attend relevant seminars, workshops or trainings. Upon their return to station, seminar or workshop participants conduct "echo" conferences to share learned concepts with the rest of the faculty or staff of the institution.

As per government policy, only general education instructors with master's degrees are hired. On the other hand, only licensed deck officers are accepted as professional instructors.

Visiting lecturers from government and reputable private organizations are regularly invited to enhance regular instruction at the graduate level.

To achieve the mission of the school to provide quality education, the faculty members are formally evaluated at the end of the semester using two (2) evaluation tools: (1) Classroom Observation Form (COF); and (2) Efficiency Effectiveness Competence Form (EECF).

The staff are likewise evaluated twice a year using the Efficiency Effectiveness Competence (EEC). Each employee is evaluated by the department head, peers, and administrator and him/herself .

HIRING AND CAREER PROGRESSION

The standards for hiring and career progression include knowledge/education requirement, skills and abilities needed for the job. Potential faculty and staff are required to accomplish an application form. The teacher applicant is also required to perform a classroom teaching demonstration to gauge his/her teaching skills.

The school follows the criteria for succession planning program. In case of a vacant teaching position, the applicant who meets the qualification requirements is considered for the position. For temporary absences, an officer in charge is appointed.

FACULTY AND STAFF WELL-BEING AND SATISFACTION

The school has committees composed of faculty and staff, which handle the tasks of improving workplace health, safety, security and ergonomics.

Emergency plans and fire prevention equipment are strategically located in the office; s and seminars and trainings on safety are regularly conducted. Emergency procedure devices are regularly evaluated and maintained by the safety committee and safety-related activities are conducted.

The school strongly acknowledges the employees' important role in the success of the organization. After all, the employees are the frontliners in the delivery of the institution's services to its stakeholders. The school appropriates funds to ensure the employees' safety, well-being and satisfaction through wellness programs, adequate compensation, legislated benefits and recognition of exemplary performance.

The school maintains its commitment to workplace safety and security through the head of discipline who closely works and coordinates with the school's security officer, chief of plant and facilities and the local police.

The institution has provisions for the professional faculty's ship-board upgrading leave to enable the faculty to learn current trends and technologies onboard international ships so that, when they return to the school, they can share these with the students. The policy provides that professional instructors on ship-board upgrading leave/retains their tenure in school provided that they go back to teaching when they disembark.

Data on absenteeism and grievances are used by management as reference in identifying the services and benefits needing improvement. The employees' productivity performance is utilized in determining promotions and allocation of benefits and privileges.

PROCESS MANAGEMENT

The University continues to develop appropriate processes needed for the delivery of quality education and training aligned and in consonance with government requirements.

Institutional surveys and internal and external scans are utilized in the development of curricular and training programs for highly employable and globally competitive graduates. Key learning-centered processes include instruction, assessment, certification and placement designed to produce graduates with knowledge and competencies required in the local and global markets. The processes employed ensure that the JBLFMU-A objectives are met.

The University's productivity undertaking is greatly focused on the development of instructional materials, training aids and innovative tools. Periodic assessment is done to ensure the students' best possible learning and their certification for placement.

The fulfillment of key learning-centered process requirements is determined through the school's accreditation. The surveys conducted among students, faculty and staff, parents, and shipping companies draw exigent feedbacks and recommendations.

The University annually reviews its curricular and other programs to ensure that their contents remain relevant to the current requirements of the industry and other stakeholders. Information obtained from the annual review serves well in the development of approaches to enhance student performance as well as recognize the contributions and determine the needs of the faculty and staff.

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