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**Philippine Maritime eLearning:
Development, Status and Prospects**

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Abstract: Technology has shaped a changing picture of educational instruction and training. It has revolutionized learning, propelled changes in the goals of education and created different learning structures. It inevitably changes training and learning designs. Technology has altered the teaching and learning milieu and has allowed a more dynamic delivery of instruction and training. The evolving powerful systems of technology strengthen alternative learning modes built on the principle of “anytime, anywhere” delivery of education that brings people together for collaborative and reflective learning. This breakthrough was markedly felt in the maritime field as major revisions in the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (the STCW Convention) emphasize the need for modern training methodologies. The STCW ‘95 Manila Amendments of June 2010, which came into force on January 1, 2012, underscore the need to introduce modern training methodologies, including distance education and web-based learning.

As the Manning Capital of maritime manpower that supplies at least 30% of the global workforce, the Philippines looks intently on the challenge of alternative delivery modes of instruction and training. This further encourages maritime higher education institutions to consider more seriously distance education as an alternative academic delivery mode in the light of global themes and 21st century teaching and learning. If the Philippines hopes to remain as the top seafarer producing country, it should well be competitive in providing quality training and education that emphasizes a flexible mindset fundamental to lifelong learning, puts individual student needs at the core of instruction, and adopts cutting-edge technology.

As a premier educational maritime institution in the Philippines and being the only maritime university in the country, the John B. Lacson Foundation Maritime University takes

as its major task the promotion, development and delivery of maritime eLearning in the country.

It is in this regard that the JBLFMU is taking bold steps in spearheading this eLearning mode as it establishes baseline data on Philippine Maritime eLearning.

This study is aimed at providing a picture of the gradual evolution of eLearning in maritime schools in the Philippines.

Keywords: maritime eLearning, distance education, web-based learning

1. Introduction

New technology has conveniently ushered in new shifts in the learning paradigm. The inevitable technological breakthrough has established a learning landscape that makes learning management systems accessible through the internet, making it more feasible for learners. This rapid advancement in technology triggered a new perspective of distance education, a delivery system that rises beyond the limitations of traditional whole-class instruction. It has widened the access to education as it encourages unity, collaboration, and interconnectedness.

Specifically, this mode of instructional delivery—which may have taken variations of themes such as correspondence study, distance education, distributed education, hybrid classes, open learning, online learning and e-learning—ushers education to an extensive range of the student populace which the traditional residential or face-to-face classes fail to reach. Distance education removes learning barriers and promotes greater learner autonomy, independence and flexibility.

The features of Open Distance Learning (ODL) have been the impetus of its wide adoption by academic societies. ODL looks intently on aspects of students' needs, design of self-study materials, student support, cost-effectiveness and quality of materials and delivery system. Being a student-centered approach, ODL gives the learners ample freedom to establish their own goals while helping them recognize their potentials. It also paves the way to the understanding that self-development is a lifelong process and certainly not restricted by time and space.

The maritime industry is characterized by increasing and rapid development in communication systems. The growing need for fast and effective communications on board ship, which will facilitate efficient data exchange between ship and shore, has pushed for the establishment of internet infrastructures. Most companies to date adopt communication systems with unlimited and seamless broadband connectivity enabling the use of voice calling, e-mail, GPS system and also web browsing.

With the evident development in the maritime industry, former IMO Secretary General Efthimios E. Mitropoulos has challenged the maritime training and education providers to take a vital part in ensuring that standards of manning and operation will be equally high inasmuch as modern ships are designed and built to the highest technical standards (Mitropoulos, 2012).

Thus the STCW '95 Manila Amendments of June 2010 underscore the need to introduce modern training methodologies, including distance education and web-based learning. The web based learning portals open the use of both asynchronous and synchronous tools and support shared workplaces, net-based teamwork and intercultural communication.

This has encouraged the John B. Lacson Foundation Maritime University (JBLFMU) in the Philippines to take the lead among Philippine maritime higher education institutions to consider more seriously distance education as an alternative academic delivery mode. As the only maritime university in the country, the JBLFMU has helped establish baseline data in terms of maritime eLearning capability of the HEIs in the country.

2. Content

Online Distance Learning Development

The development of online distance education in the Philippines is categorized into four generations. Although it may have its roots in the US-based correspondence school, which operated in the 1940s and the 1950s, the first generation of distance education in the Philippines was the "School on the Air" for farmers in Iloilo province produced by broadcaster Pacifico Sudario in 1952 (Librero, 2007).

The second generation of Philippine distance education was the development of learning modules in printed form when the first effort to offer a degree program in the distance mode became possible at the UP Los Baños in 1984 (Librero, 2007). With the breakthrough of Information Communication Technology in the 1990s, the third generation of distance education in the country transformed the printed modules into technology-based materials, giving way to the development of computer-based and CD-form learning packages among others. However, technology became more sophisticated in the last decade and learning materials became more engaging, allowing students to navigate them on the web through a defined sequence, thus emerged the eLearning format, the fourth distance education generation.

The new world order, characterized by increasing interconnection and collaboration, directs education's fundamental purpose to ensure that all students benefit from their learning through the use of appropriate technology. Learning platforms and environments must foster social construction and knowledge, making students become active creators of knowledge and information with emphasis on the development of networks and online communities.

When people talk about modern methodology, they promptly think of technology as tools in exploring and communicating ideas. Does this influence maritime training and education as it tries to permeate the global village and traditional institutions? Distance education has in fact penetrated maritime education and training for more than a decade. The increasing demand for well educated officers and crew and the rising number of applicants in the maritime industry may well be met through the use of eLearning (Rangan, 2007). As Rangan puts it, eLearning is the new concept in Maritime Education and Training.

Maritime Education and Training in the Philippines

Educational maritime programs are among the essential courses which continuously contribute to the Philippine economy. The archipelagic nature of the country naturally exposes the population to sea-related activities, particularly seafaring. Since the establishment of the first Philippine maritime institution in 1820, there are now a total of 94 maritime higher education institutions in the country producing an annual average of 10,000 graduates. Data on maritime courses show an average of 52,789 enrollees every year clearly confirming many young Filipinos' preference for maritime careers.

Maritime schools in the Philippines stringently follow the requirements of the Standards of Training, Certification and Watch keeping (STCW) for Seafarers and all its amendments. The STCW is embodied in the Policies Standards and Guidelines for Maritime Studies which directs the curricular programs of all maritime schools. Government allows these schools to conduct and administer baccalaureate courses with three years of formal school attendance and one year of supervised shipboard apprenticeship for deck and engine cadets.

There are 94 maritime schools in the Philippines at present. However, the Commission on Higher Education for the country has identified only eight eligible for Distance Education

delivery. This is due to the policy that only schools with Level III accredited status are allowed to offer the distance education delivery mode. Of the eight schools, only the JBLFMU has met the required accreditation level requirement. A school takes at least 15 years to reach Level III accredited status. The JBLFMU is at Level IV and has been granted Institutional Accreditation. Of the eight schools, two are on Level II accredited status and one on autonomous status. All of the schools are recognized by Government.

Distance Education for Seafarers, a tri partite project funded by the Canadian International Development Agency covering the years 2008-2011, involved the Commission on Higher Education, the John B. Lacson Foundation Maritime University and the Memorial University of Newfoundland's Marine Institute. The CIDA project helped paint a picture of the Philippine maritime eLearning landscape. It also opened the path for the establishment of the JBLFMU's eLearning infrastructure. Relevant training, workshops and benchmarking built the university's capability to spearhead and promote maritime eLearning in the Philippines. Through the project, baseline data on the Philippine maritime schools' capability for eLearning was likewise ascertained.

Using the components of the online distance learning used by the JBLFMU, the eight participating Philippine maritime schools identified their readiness for eLearning. The school participants in the workshops generally have their respective experts who can provide the technology infrastructure and conceptualize as well as execute delivery and support services. The concern on courseware development was best addressed by content experts among the faculty and consultants of the schools. The concern on the learning management system becomes less of a burden in view of the numerous options for LMS commercial or open software. The workshops offered the participating schools a clearer direction on how to employ an LMS to serve them best. Four participating schools felt the need to hire instructional designers to serve as administrators of their eLearning platforms. All eight schools agreed that top management and administration must embrace the concept of eLearning for it to succeed in their institutions, especially because of the financial costs involved

The interface of the eLearning infrastructure is illustrated in figure 1.

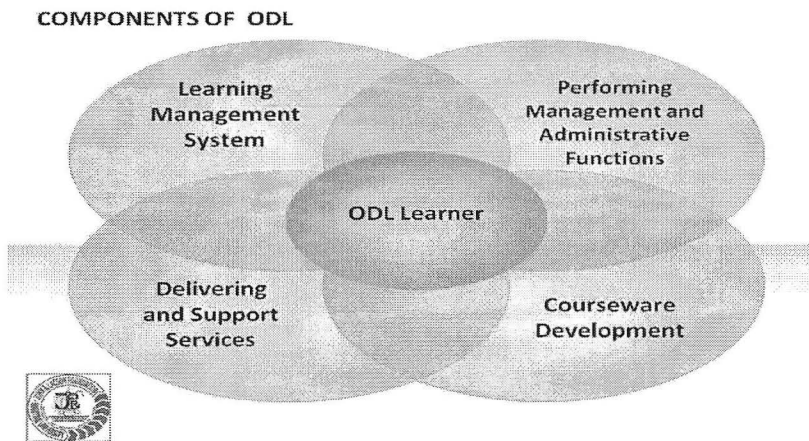


Figure 1. Components of the JBLFMU eLearning infrastructure

Philippine Maritime eLearning: The JBLFMU's experience

The JBLFMU Open Distance Learning system was established with the objective of providing formal learning opportunities for maritime instructors/trainers and maritime and shipping industry personnel onboard ship and/or ashore. The conceptualization of the JBLFMU's maritime distance education system came about in 1999 and was granted a government permit in 2000. Seeing the potential of distance education in the maritime discipline and with technology providing multiple media, the University's management has established infrastructure for online learning through the use of an all-inclusive learning management system.

In this time of heightened competitive pressures, educational institutions can meet up with management responsibility through the application of the latest technologies for education and training, job performance improvement, and knowledge management. These technologies will help the organizations reduce cost, improve personnel performance, increase efficiency and enhance service quality.

As a prompt response to the needs of the time, the JBLFMU has established online learning as a mode of instruction delivery with its practical and operational advancement. The main objective is to make education and training available to clients at all times as they learn new skills and enhance present competencies to become professionally in-demand. Providing a non-linear approach to learning, the online delivery system affords the students access to instruction and helps them achieve educational goals. The eLearning system also enhances faculty excellence through training designed for their instruction empowerment along pure online application or blended instruction.

To date, the JBLFMU ODL system uses the internet as the learning environment anchored on accessibility, ease of circulation, and dynamic and systematic filing and storing capacity. It uses an open source learning management system (LMS), a software application or Web-based technology used to plan, implement, and assess a specific learning process. Typically, a learning management system provides an instructor with tools to create and deliver content, monitor student participation, and assess student performance.

A learning management system may also provide students with the ability to use interactive features such as threaded discussions, video conferencing and discussion forums. It also provides user reports, lesson reports, course reports, system reports and test reports. In terms of system administration, it is also capable of importing/exporting courses and lessons with multilingual support. The LMS must have advanced security which provides the user and administrator exceptional security, scalability and support.

The eFront LMS, being open by nature, has the means to customize relevant requirements that best suit the university's needs. What makes the LMS perfect for the JBLFMU ODL is the eLearning delivery which includes: content management, assessments, projects, scheduling, glossary, file library, lesson rules, Scorm 1.2, linked lessons, lesson capacity and course instances among others (eFront, 2011). It also has communication tools that provide both instructors and students with constant collaboration be it in or outside the classroom.

Benefits and Challenges of Maritime eLearning

Challenges

Although eLearning is a better option for delivering maritime training and education, there are challenges and barriers in its development. The significant barriers to distance education relate to faculty compensation and time, organizational change, and lack of technical and faculty support (Berge, Muilenburg, 2006). Along

with this, the management must include in its strategic planning issues concerning start-up cost and long-term product updates; cross-cultural teaching and learning; competition and marketing; student support services and faculty support. Philippine schools will have to contend moreover with government regulations on distance education that require specific accreditation levels to qualify for distance learning delivery. Undergoing accreditation entails great financial outlay as it requires the improvement of all aspects of the institutions--curriculum and instruction; faculty; students support; library; research and other resources. The accreditation timetable makes it impossible for a school to earn Level III accreditation status in a year or two.

Benefits

The evident benefits of eLearning are far from what can be found in conventional schools. Other than flexibility, eLearning get students more involved in the learning process as they are given greater access to course instructors and tutors than in an on campus setting. The personalized instruction delivery allows learners to learn course materials in a better way, resulting in higher retention and greater collaboration. Learners thus benefit more and better from this academic experience.

If, in the past, distance learning issues included isolation; the present eLearning, being technology driven, has eliminated the isolation factor of distance learning. The eLearning platforms require students' involvement and collaboration in course projects. They can utilize learning materials even if they are offline. The eLearning system has shifted to a more learner-centered style which makes the learner connected to the classroom. The creation of eLearning platforms opens the door for collaboration and networking among Philippine maritime schools and eventually leads them to the global maritime field.

Prospects: Summary and Conclusions

Distance education has recently been getting much attention from, and attracts, many established universities as well as individuals. The principle of "anytime, anywhere delivery" of online education brings people together for collaborative and reflective learning. This "repackaging" of educational content has created new markets for education and training. It has inevitably changed the way training and learning are designed.

The eLearning platforms extend education and school management into the digital realm, deliver rich media resources, provide collaboration tools for project work, and encourage online communication between students and instructors. The primary benefit is that eLearning courses provided by the school can be delivered to, and accessed by, all concerned users over the school's network or internet. Instructors become adept in developing digital course content and learn how to set, mark and record student progress online.

Much support must be extended to the development of information technology since it plays a vital role in distance education. It makes possible the delivery of information to students in multiple locations via the internet.

With eLearning, democratization of maritime education and training is made possible. Maritime schools and training centers can easily reach out to interested learners who may not have the luxury of time for traditional classroom-based instruction but, because they are technologically competent, can enjoy the pleasure of maritime education via eLearning. On the other hand, maritime schools in the Philippines are given the opportunity to prove their goals of globally competitive education and effective technology-based instruction with their support establishments and implementation of maritime educational programs through distance learning.

For Philippine maritime education, there is no better path than the revolutionary way towards distance learning. There is no turning back—maritime education must go forward and welcome the fresh world of educational change. And in the Philippines, John B. Lacson Foundation Maritime University is leading the way.

References

- [1] Anderson, T. (2008). *The theory and practice of online learning*. AU Press, Canada.
- [2] Arante, C.; Batiduan (2011). Case study; john b. Lacson foundation maritime university online distance learning lms. Paper presented during the 10th eLearning Conference, Palawan, Philippines. December 2012.
- [3] Baker, J.; Rovia, A; Ponton, M (2008). *Distance learning in higher education, A Programmatic Approach to Planning, Design, Instruction, Evaluation, and Accreditation*. Teachers College, Columbia University, New York.
- [4] El Attar, I. (2009). *Use of Progressive Technologies in the Maritime Educational Process*. Paper presented during the 26th International Conference for Seaports and Maritime Transport. <http://marlog-aast.org/old/2010/papers/S54.pdf>. May 9, 2012.
- [5] Flor, A. (2009). *Economics of eLearning for the Indonesian Maritime education and Training Sector*. http://up-ou.academia.edu/AlexanderFlor/Talks/57343/Economics_May_11_2012
- [6] Librero, F (2008). *Distance Education in the Philippines; Issues and Concerns*. UP Open University, Quezon City, Philippines
- [7] Mitropoulos, E (2010). *Technical Cooperation in Maritime Education and Training*, Keynote address. IAMU General Assembly, 15 October 2010, Busan, South Korea
- [8] Rangan, KHK (2007). *e-Learning—New Concept in Maritime Education and Training*. www.thedigitalship.com/powerpoints/hk05/RANGAN%20e. May 10, 2012