INITIAL EFFORTS IN ESTABLISHING AN ELECTRONIC ARCHIVING SYSTEM OF UNDERGRADUATE THESIS AT THE ROMBLON STATE UNIVERSITY, PHILIPPINES

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Abstract: The electronic archiving of undergraduate thesis of the College of Engineering and Technology in the Romblon State University is currently in infancy/pilot stage of implementation. These initial efforts aim to assess the current level of documentation process towards establishing an e-library or an online platform for storing, archiving and easy access of undergraduate thesis in the fields of agricultural engineering, civil engineering, electrical engineering and mechanical engineering. Both administrative and technical problems were identified towards improvement of the quality of the thesis, including strategies to be employed in the proper management of the thesis in electronic format for better access and retrieval, vis-à-vis protecting the intellectual property rights of the student researchers. A framework that identifies a workable strategies is proposed for the full implementation of the project in all colleges and across island campuses.

***Keywords*:** archiving, e-library, higher education, undergraduate thesis, engineering

INTRODUCTION

In general practice, the libraries of every college and university are responsible in keeping both print (hard copy) and electronic theses and dissertations (ETDs) safe. This safe-keeping management covers the submission, archiving and dissemination as well as the administering and making open and free access to the research datasets and other complex digital objects features (Meister 2016). The widespread use of ETD programs and its advantages have been documented (Lippincott 2006), recognized and accepted worldwide (Singh and Tanwar 2017; Alemneh et al. 2014; Khaparde1 and Ambedkar 2014; Ramirez et al. 2013) as a rich source of knowledge in assuring that replicable research is available for future researchers/scholars in this digital age. Thus, this increasing ETDs open sharing transforms the way of learning, research and scholarly communication in academic institutions (Singh and Tanwar 2017). It is also argued however, that even ETD programs are being widely used, it is still relatively new due to the lack of consensus or understanding among key users and administrators on ETD fundamentals and available range of service options, including impediments in relation to intellectual property and copyright laws (Ola 2016). These factors make colleges and universities difficult to develop, maintain or even improve existing electronic archiving programs, consequently bring fears and uncertainties over open access administration (Meister 2016) that may exploit research outputs (Ola 2016).

This paper focuses on the preliminary undertakings of the author to implement ETD program, being the Research Coordinator of the College of Engineering and Technology (CET) and Head

- Intellectual Property Unit (IPU) of the Romblon State University (RSU), Philippines. It also highlights the author's motivation and personal experiences to embark in developing ETDs at RSU. Moreover, this paper examines and assesses the technical and administrative issues and problems that influence the success of this initial effort. The study is exploratory and descriptive type of research in nature which the data analysis presented here are based from author's observation, access to RSU main library database, and from the reports submitted to IPU.

The findings show that no centralized unit overseeing the management of the theses for all the campuses of RSU. There was also lack of technical know-how among students and faculty in the aspects of ETD documentation/submission, including issues on plagiarism and intellectual property rights (copyrights and patents). Thus, to fully embark in developing and implementing ETD programs at the college (program) level, there is a need to come-up with a workable strategies to improve the current database management of ETDs across colleges and campuses, and the institutionalization of the Intellectual Property Unit (IPU) for the entire university.

METHODOLOGY

This paper employs exploratory and descriptive type of research. The methods involved are qualitative and quantitative analysis, including review of reports submitted to IPU, and from the library database system; thus utilizing both primary and secondary data sources. The personal experiences of the author is the primary motivation to pursue with the study as well as access to various online resources provided by NDLTD, EBSCO, Sci-Hub, Philippine eLib and EThoS. Part of the study is the validation of thesis details in terms of names of the students, advisers, and year of submission. Part of this validation is to have actual inspection of the hard copies at the main library and Registrar Office of the university.

The author's motivation towards ETDs program development

It started when the author's supervised a thesis study entitled, *Archiving of Theses for an Electro-Net Access (ATHENA)* in 2013. The study came-up with a development of a database system called ATHENA using *Visual basic.net* and *MySQL workbench* which are online software and database server providers (Acosta et al. 2013). The author also involved with RSU-CET Level III AACCUP Accreditation (quality assurance instrument for state colleges and universities in the Philippines) which led to compilation of theses submitted in the college. Moreover, the author also maintains several blogsites powered by *Wordpress* and *Weebly* for his personal use as "self-archiving" approach. However, due to his administrative appointment at RSU, he also started using these platforms to enhance his instruction/teaching for academic programs, including thesis writing courses where students have access to handouts, assignments, guidebooks and other relevant reading materials to augment classroom discussions. The NDLTD online resources is also influential in the author's appreciation of the need for open access ETD database in the institution. One of the initiatives of the author is to prepare a guidebook, entitled, *Engineering Research Project Guidebook – Thesis Writing* that serves as a handbook for students in writing-up of their theses.

FINDINGS

The Romblon State University (RSU) is one of the government tertiary institutions in the Philippines with a student population of approximately 9,940 with more than 400 regular faculty and staff filled-up positions both in the main campus and its satellite campuses which

offer the following programs/areas: (1) agriculture, fishery and forestry, (2) education, (3) criminal justice, (4) engineering and technology, (5) arts and sciences, (6) business and accountancy, (7) information technology, and (8) graduate studies. All of these courses both in undergraduate and graduates' programs require the submission of thesis prior to graduation, including dissertation in the doctoral level. The completed faculty-student researches are submitted in hard copies to the following offices/units: (a) College Reading Resource Center (e.g. College of Engineering and Technology), (b) the Department under that College (e.g. Department of Civil Engineering), (c) University central library, and (d) Registrar's Office. Unfortunately, aside from the central library, every college has its own way of storing and archiving these documents in hard-bound forms. If there is a database management system in place, it is very primitive way in nature – an ordinary filing of keeping and recording of thesis title, the names of the student(s), name of adviser, and year submitted. No existing archiving system – just a normal depository of the physical submission of the theses.

With regard to thesis writing and submission, the research coordinator of the college (program) oversees the compliance of the engineering students towards the final submission of the thesis to their respective departments. The coordinator also sits as a member of panel of examiners during the final oral defense of the undergraduate students. The overall undergraduate thesis documentation process is guided by the university Research Manual which explicitly explains the guidelines of the thesis submission for the students to follow. On the other hand, the Intellectual Property Unit (IPU) created in 2015 initially spearheaded the immediate review and approval of the Intellectual Property Rights (IPR) Policy Manual. Along this line, IPU started building-up the database management program by encoding details of the theses and dissertation accumulated in the past 15 years. The first stage of the program started with the assessment of ETDs in the College of Engineering and Technology as the pilot case study. Specifically, out of the 152 theses submitted in from 2001 to 2018 at the College of Engineering and Technology, the Civil Engineering Department got the highest share of 45%, and this is followed by the Mechanical Engineering with 24% and Agricultural Engineering, 22%.

Despite the current system, there are problems and issues that the college is facing right now. Some of the pressing problems are as follows: (1) no centralized unit overseeing the management of the theses or there is no overall custodian of the ETDs for all the campuses of the university; (2) the disappearance or missing of copies in the library and in the individual college resource center; (3) every campus has its own compilation and storage management and island/satellite campuses do not provide copies to the main campus; (4) non-conformance in the template and style of the thesis among campuses and colleges; and (5) lack of orientation and training programs both for students and faculty in the aspects of ETD documentation, including Intellectual Property Rights (IPR).

CONCLUSIONS

The initial efforts by the author will lead to the promotion of ETD open access at RSU. Given the opportunity to attend and present this paper in ETD 2018 Taiwan allows the author access to useful, innovative resources and technologies as well as networks with other participating institutions Eventually, thru fostering partnership/collaboration with the foreign universities/colleges, RSU will be one of the prime movers in promoting ETDs open access ETDs in the ASEAN region and it will also inspire other State Universities and Colleges (SUCs) in the Philippines towards improving ETDs data sharing that will foster recognition and appreciation of intellectual works among faculty and students by the wider society. To materialize this vision and to address the identified issues and problems, the specific proposed

plans and activities are as follows. At the university-college-program level: (a) institutionalization/operation/implementation of the Intellectual Property (IP) Unit; (b) formulation of ETDs implementation plans and programs; (c) capability building – IP awareness among students and faculty across colleges and campuses; (d) creation/establishment of a database management (repository) system across colleges and campuses, including digitation and electronic submission, and archiving towards open online-access services. At the regional level: (a) coordination with the Tagalog Islands Research and Development Consortium-Intellectual Property Unit (STIRDC-IPU) for the establishment of regional data sharing portal accessible among members; and (b) capability building (trainings, conferences) on ETDs initiatives among members. Finally, at the national level: (a) streamlining with the national policy directives on free and open sharing among state universities and colleges in the Philippines, including private institutions; (b) close coordination with Intellectual Property Office of the Philippines and other concerned agencies in the promotion of ETDs programs; and (c) maintain communication and collaborative efforts with the international (National Digital Library Theses and Dissertations (NDLTD) college/university members.

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