

## **To pass or fail: A University of Mindanao librarian licensure performance study**

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### **ABSTRACT**

The purpose of this study was to determine the UM librarian licensure exam performance from 2002 to 2012 and find out the influence of the scholastic performance of the student in the probability of passing the board exam. Employing prediction-causation method of research, revealed that the UM Library Science graduates have low level of performance in the Librarians Licensure Examination, their passing rate is still high as compared to the national passing percentage. The graduates had a good GPA performance and their academic performance in the English subject is moderate. Of the subject clusters in the licensure exam, information technology have the highest score, followed by management of libraries with laws and practices, selection and acquisition of library materials, reference bibliography and user services, indexing and abstracting, and the lowest cataloguing and classification. Moreover, English grade does not statistically relate with passing the board exam; while GPA have statistical influence on passing the board exam.

**Keywords:** *Librarian Licensure Exam, University of Mindanao.*

### **INTRODUCTION**

The effectiveness of the school programs may be measured through the quality of the graduates and its performance in the licensure examinations (Lozarita, Saromines, Abellanos, Acedan and Pernia, 2007).

In the United States, several schools struggle to recruit students with a high GPA with the views of seeing equivalent give-and-take performance at the end of their course on board examinations (Pringle and Lee, 1998). Also, board examinations are not only a conception on the student who takes them but also the institution itself (Kenya, Kenya and Hart, 2013). This is because students' success on board examinations is an essential performance indicator to the sustainability of the school's standards. Furthermore, it is important that

perceptible predictors should be identified to increase the passing rates and achieve higher examination scores. According to Pringle and Lee (1998), students with high general percentage average (GPA) is an important predictor of academic success. Therefore, in this study the main focus is to explore the GPA of the takers in relation to the librarians' board examination performance.

Accordingly, "librarianship as a profession in which members are engaged in the application of appropriate theories, principles, tools and techniques in implementing information-service-related activities; including the collection, preservation, organization, management of and access to recorded information" (Prytherch, 2005:415). Hence, the Library and Information Science profession has evolved with fast advances in Information and Communication Technologies (ICT). It is noted that the accessibility of these technologies are escalating and librarians need to adapt mechanisms to address the needs of the users.

In the Philippines, the government recognizes the significant role of librarians in developing the information literacy of the people. Library service is one of the components for national development (Art. 1 Section 2 of RA 9246). Besides, the profession of librarianship as a vital component of the total educational process is faced with the continuing challenge of having to adapt its programs and practices to the accelerating changes brought about by the new information communication technologies (CMO No. 8 series 2005).

The Library and Information Science Program is a degree requirement to become a librarian. The primary objective of the degree program is to prepare and equip the students for specialized work in libraries and information center and for teaching of library and information science field (Faderon, 2008). As a matter of fact in RA 9246, the practice of professional librarian is only valid for a legitimate holder of a certificate of registration and professional identification card issued by the Professional Regulatory Commission (PRC).

In order to produce highly qualified information professionals, schools offering the LIS program must provide a quality standard of instruction, facilities, and services. The LIS program provides various studies on the theories, principles, and practices necessary for the delivery of quality and professional library and information services. Likewise, as specified in RA 9246 to practice librarianship, graduates of library and information science course are required to take and pass the licensure examination for librarians.

On the other hand, the licensure examination is an act of initiation for the students to prepare them for a challenging world outside after graduating from their respective academic institutions during their tertiary years. According to Bhattacharya (2009) board examinations are point of reference for assessing students' ability and educational standards that help them to encounter the most challenging examinations and discuss easily the situations given.

Moreover, the original set of knowledge and skills that information handlers were expected to have before is now deemed short of meeting the needs of more sophisticated information seekers. Along with this trend, Ramos, Ananoria, and Nera (2012) stated that there is an increasing demand for library and information professionals compared to the number of those who passed the Librarians' Licensure Examination (LLE). Thus, there is not enough to fill in vacant library positions in the Philippines. It was observed that the performance of the BLIS graduates in the board examination is unsatisfactory.

In fact, a study conducted by Ramos, et al. revealed that age, gender, and type of examinees do not significantly affect the performance in the librarians' licensure examination. In addition, David and Perez (2006) investigated the librarians perceive readiness for the workplace after graduation and passing the licensure examination revealed that there are schools that consistently produce graduates who pass the licensure examination and the successful examinees perceive that the curriculum adequately prepared them for the examination and the workplace.

Locally, the University of Mindanao is the largest private, non-sectarian university in Mindanao is faced with the current status that there is a necessity to understand the growing need for excellence in the programs offered by the school especially those with board examinations. According to Tamayo, Bernardo and Eguia (2014) the most immediate success of this measure is the performance in the board examination. In the area of librarians' board examination, the school is always aiming for a high performance in the board examination. As strategies, it conducted board examination reviews. The reviews for the takers provide enhancement on the fundamental principles, theories and legal aspects of the profession to prepare the students on their actual licensure examination.

Indeed, the researcher conducted this particular study because there are no investigations yet on librarian board examination in The University of Mindanao. Further, this study determined the performance of the library and

information science graduates of the University of Mindanao in the licensure examination for the periods 2002 to 2012.

## **METHOD**

This section described the applicability of research methodology and discussed the variables used in the investigations, and the empirical model employed to predict board exam result and simulate scores. The research instrument, coverage of exam for librarians, and data gathering procedure were also explained in this section.

### **Research design**

The study employed a prediction-causation method of research. Prediction refers to the effect of one variable on another variable while causation means the change in the values of the dependent variable due to a unit change in the independent variable (Tamayo, et al., 2014). The study employed ordinary least square (OLS) estimation to predict the variables that would determine the board exam outcome, then, maximum likelihood estimation (MLE) was employed to maximize the probability of success in the board exam.

### **Variables and data**

The variables used to determine the probability outcome of the librarian board exam was the General Weighted Average (GPA). The students' scores in the librarians' licensure exam was gathered. In this study, the variables were grouped into two categories: the scholastic performance and the licensure exam performance. The former was the academic preparation of the students while the latter would be considered as the target scores in order to pass the board.

The data were collected from the permanent record of the students who took the exam from 2002 to 2012 while the licensure exam results were taken from the Professional Regulation Commission (PRC).

### **Model**

The study employed the logistic regression and the linear regression analyses. The empirical tool was appropriate to the study because the dependent variable takes a dichotomous categorical value (*pass* = 1; *fail* = 0) of the board outcome (Tamayo, et al., 2014). It is assumed that the probability of passing increases as the grade indicators increase until a edge for passing is reached equal to probability of 1, thus the probability of passing the board exam is

assumed to take an *S – shaped* function. The log-odds of the proportion of the dependent variable takes the form  $\log_{it}(\pi) = \log_e \left( \frac{\pi}{1 + \pi} \right)$ . The functional model therefore was used to determine the log-odds of the probability of passing the board as predicted by the scholastic performance indicators (GPA and correlation grade) and the target score of the clusters (subject clusters 1 to 3) would be

$$\log_e \left( \frac{\pi}{1 + \pi} \right) = \gamma + \beta_1 GWA + \beta_2 Corr + \beta_3 Subj1 + \beta_4 Subj2 + \beta_5 Subj3 + \varepsilon_i$$

The paper employed the maximum likelihood estimation to express the probability for each outcome (*pass* = 1; *fail* = 0) where the coefficients  $\gamma$  and  $\beta$ s are being maximized. The linear regression was used to predict the score in the librarian board exam given values of the variables that were found to show influence in the probability of passing the board exam.

### Research Instrument

The Student Permanent Records (SPR) of the respondents were procured from the Registrar’s Office of the University to determine the respondents’ academic performance in professional subjects and GPA in English subjects. The level of academic performance in terms of point weighted average (PWA) was categorized using the 5-point scale as follows:

1.00 – 1.79	Very High
1.80 – 2.59	High
2.60 – 3.39	Moderate
3.40 – 4.19	Low
4.20 – 5.00	Very Low

The LLE performance of the respondents as provided by the PRC was described using the mean rating percentage of passers in the six subject areas- Management of libraries with laws and practices related to librarianship, Reference bibliography and user services, Selection and acquisition of library materials, Cataloguing and classification, Indexing and abstracting, Information technology and the overall rating as well

81- 100	Very High
61- 80	High
41 – 60	Moderate

21 – 40                      Low  
0 – 20                        Very Low

#### **Coverage of Exam for LIS**

The librarians' licensure examination covered six major subjects required by the Library and Information Science curricula for both the undergraduate (BLIS) and graduate degrees (MLIS). These are: Library Administration, Cataloguing and Classification, Reference, Bibliography and Information Services, Collection Development involving Multimedia Resources, Indexing and Abstracting, and Information Technology. An examinee must have "a weighted general average of seventy five percent (75%), with no grade lower than fifty percent (50%) in any subject" (Republic Act 9246, 2004).

#### **Data Gathering**

Permission to conduct the investigation was sought from the Executive Vice President for Academic Affairs of the University of Mindanao. After approval to conduct the study was granted, the researcher requested for a list of graduates from 2002 – 2012 from the Records and Admission Center. The scholastic records of graduates from 2002 – 2012 were obtained from the University Registrar's Office; while their performance in the LLE was requested from the PRC.

## **RESULTS AND DISCUSSIONS**

This chapter presented the data and the analysis of findings. It covered the profile of UM librarians' board exam performance, the academic performance of the takers, subject cluster performance, and the parametric model that influenced in passing the board exam.

#### **UM Librarians Board Exam Performance**

Presented in Table 1 is the level of performance of library science graduates in the Librarians Licensure Examinations from 2002 – 2012. In 2002, the Library Science graduates showed a high level of performance with a passing rate of 62.5 against the national passing rate of 52.44. While a moderate level is obtained in 2003 and 2004 with a passing rate of 57.14 and 44.44 against the national passing rate of 51.10 and 29.05, respectively.

However, decreased in the passing rate was noted in 2005 and 2006 where takers obtained a passing rate of 30 and 22.22 compared to the national passing rate of 31.50 and 36.73, respectively. On the other hand, an increased in the

passing rate was observed in 2007 where takers obtained a passing rate of 50 against the national passing rate of 32.03.

Likewise, decreased in the performance of the graduates was observed in 2008, 2009, and 2010 with a passing rate of 20, 36.36, and 0 against the national passing rate of 23.63, 29.99, and 0, respectively.

Table 1 Number of passers and flunkers per exam period

Exam Period	Passers	Flunkers	UM Passing Rate	National Passing %
November 2002	5	8	62.50	52.44
November 2003	8	14	57.14	51.10
November 2004	4	9	44.44	29.05
November 2005	3	10	30.00	31.50
November 2006	2	9	22.22	36.73
November 2007	5	10	50.00	32.03
November 2008	2	10	20.00	23.63
November 2009	4	11	36.36	29.99
November 2010	0	6	0.00	27.32
November 2011	4	6	66.67	27.62
November 2012	2	6	33.33	46.67
Average Passing Percentage			38.42	35.28

Nevertheless, an increased in the passing rate was noted in 2011 where takers obtained a passing rate of 66.67 compared to the national passing rate of 27.62. On the other hand, low performance in 2012 was observed with a passing rate of 33.33 against the national passing rate of 46.67.

There are potential reasons that affect poor performance in the board exam as revealed by Griffiths, Papastrat, Czekanski and Hagan (2004). They found that poor preparation, inadequate study habits, lack of knowledge about how to prepare, difficulty writing priorities, lack of confidence, poor trust taking skills, and overwhelming family responsibilities are contributing factors for the failure of the examinations that may affect the national passing performance of the

institutions. On the other hand, intervention strategies are developed to assist students in preparation for the board exam (Oermann and Heinrich, 2006). In the University of Mindanao, an in-house review for librarian was initiated to prepare and equip the students for the board examination.

The overall level of performance of UM Library Science graduates in the LLE from 2002 – 2012 was low with a mean 38.42 against the national passing rate of 35.38. This means that although the library science graduates have a low level of performance in the LLE, their passing rate is still high as compared to the national passing percentage.

#### **Academic Performance**

Presented in table 2 is the academic performance of librarian takers. Of those who took the board exam, their aggregative academic performance was found to be not outstandingly remarkable. The academic indicators in the study were English grade and the General Weighted Average (GPA).

Table 2 Academic performance

Grade	Minimum	Maximum	Mean	StDev
English	3.18	1.45	2.40	0.32
GPA	2.71	1.57	2.27	0.21

It is shown that the highest English grade of Library Science graduates was 1.45 (96); the lowest was 3.18 (79) and the total mean was 2.40 (86) with a standard deviation of 0.32. This shows that the academic performance in English subject of the graduates is moderate.

Meanwhile, it was observed that the GPA of the library science graduates had a minimum grade of 2.71 (83) Moderate, and the maximum was 1.57 (94) Very High, with a total mean of 2.27 (89) High. This means that the respondents showed a good academic performance in the GPA. However, Dunn, Baker, Mehrotha, Landrum and McCarthy (2013) regardless of the quality of teaching and preparation given to the respondents as demonstrated in their overall academic performance, an implication that students should be given various academic activities that would meet a range of student learning prerequisites and

raise student academic performance to a very high level must be taken into consideration. Research studies have shown that in order to deal with diverse learning needs students may have, teachers must have knowledge and understanding of the teaching-learning process along with adequately wide repertoire of teaching stratagems and approaches from which they can choose those that would efficiently fit the different age and ability of their students. (Dunn et al., 2013).

### **Subject Cluster Performance**

Presented in Table 3 is the distribution of scores by cluster. The librarians board examination was grouped to six subjects. In this study, for purposes of simplicity the subjects were termed as subject cluster 1, 2, 3, 4, 5 and 6. The study found out the descriptive statistics of the six subject clusters by measuring the central tendencies.

The maximum scores for the subject clusters ranges from 84-88, the lowest scores obtained between 36 to 43 which were way below the passing score as set by the Board for Librarians. While the average scores painted a bleak picture with scores vacillated between scores 64.856 to 69.232. The Board for Librarians prescribed and average score must be 75 with no grade less than 50.

Looking at the Table, Subject cluster 1 which represents management of libraries with laws and practices related to librarianship had a 86 as the highest score over the last eleven years, 69.128 for an average score, and the minimum was 36. Subject cluster 2 for reference bibliography and user services had 85 as the highest score, 68.024 as the average, and the minimum was 41. Subject cluster 3 for the selection and acquisition of library materials had 85 as the highest score, 68.1456 as the average, and the minimum was 42. Subject cluster 4 for cataloguing and classification had 84 as the highest score, 64.856 as the average, and the minimum was 38. Subject cluster 5 for indexing and abstracting had 87 as the highest score, 67.504 as the average, and the minimum was 39. Subject cluster 6 for information technology had 88 as the highest score, 69.232 as the average, and the minimum was 43. These show that the score in the cluster subjects in the board exam are not strongly high, and there seems to be a drift on the performance in the board exam.

Table 3 Distribution of scores by cluster

Cluster Number	Subject Clusters	Max	Min	Mean	StDev
1	Management of Libraries with Laws and Practices related to Librarianship	86	36	69.128	10.03
2	Reference Bibliography and User Services	85	41	68.024	10.41
3	Selection and Acquisition of Library Materials	85	42	68.1456	10.03
4	Cataloguing and Classification	84	38	64.856	10.57
5	Indexing and Abstracting	87	39	67.504	10.22
6	Information Technology	88	43	69.232	10.34

**Parametric Model that Influence the GPA**

Table 4 shows the result of the parametric estimation. It was found that English grades did not statistically relate with passing the board exam; while GPA had statistical influenced on passing the board exam. These findings indicated that having good English alone cannot readily offer some degree of certainty to pass the board exam, but adroitness in all of the competencies expected of a graduate of the course do. Having good command in English is important but not sufficient among the BLIS graduates.

Table 4 Parametric model to determine influence of GPA

Variables	Coefficient	Wald	p-value
Constant	9.62	8.84	0.00
English	-1.43	2.40	0.12
GPA	-2.81	3.99	0.05
2LL	90.35		
Cox and Snell R Square	0.15		
Nagelkerke R Square	0.20		

**Parametric Model of Board Exam by Subject Cluster**

Table 5 shows the proposed parametric models to determine influence to pass the board exam by cluster. There were four models tested: model 1 with all the clustered data which found to reveal no statistical influence; model 2 with three cluster variables; model 3 with three other variables and model 4 with five variables. Of the four models, the best fit model was found to be model 4. Of the 6 cluster subjects, the strengths of the program was cluster 3 selection and acquisition of library materials; cluster 4 cataloguing and classification; cluster 5 indexing and abstracting; followed by cluster 2 reference bibliography and user services. The program had to intensify focus on cluster 1 management of libraries with laws and practices and on 6 information technology which was its weakest. It must be emphasized that the limitations set on the models were on the size of the samples.

Table 5 Parametric model to that influence passing the board exam

Variables	Model 1	Model 2	Model 3	Model 4
Constant	-1000	-73	-101.68	-188.81
Sub1 (Cluster 1 - MLLPL)	4.31		0.43*	
Sub2 (Cluster 2 - RBAUS)	2.99		0.41**	0.92*
Sub3 (Cluster 3 - SAALM)	2.69	0.52***		0.52*
Sub4 (Cluster 4 - CAC)	4.77		0.53***	0.62**
Sub5 (Cluster 5 - IAA)	1.85	0.37***		
Sub6 (Cluster 6 - IAT)	-0.09	0.84		-0.09
2LL	0.00	42.62	18.24	10.24
Cox and Snell R Square	0.66	0.57	0.65	0.67
Nagelkerke R Square	1.00	0.82	0.93	0.96

## CONCLUSION

The students' performance in the licensure examination can be predicted by the GPA. Thus, passing the LLE is dependent on the academic performance of graduates while still in college. The overall level of performance of UM Library Science graduates in the Librarians Licensure Examination 2002 – 2012 is low, although their passing rate is still high as compared to the national passing percentage. Providing intervention activities, the result of the licensure exam can be improved. Thus, students need to be equipped with the technical knowledge on the subject matter. Of the 6 cluster subjects, the strengths of the program are cluster 3 selections and acquisition of library materials; cluster 4 cataloguing and classification; cluster 5 indexing and abstracting; followed by cluster 2 reference bibliography and user services. The program has to intensify focus on

cluster 1 management of libraries with laws and practices and on cluster 6 information technology which are its weakest.

#### **Action Plan**

On the basis of the findings and conclusions of the study, the following action plan are deduced in order to improve the licensure examination. A regular updating of library and information science syllabus consistent with the competencies sought by Professional Regulation Commission must be done so as to align graduates with competencies required in the Librarians' board examinations. The Library and Information Science Program coordinator must come up an enhancement program that will focus more attention on the subjects in the licensure examination where the graduates were found to be weak in order to improve the board exam performance. Close monitoring may be done by the teacher handling the major subjects on the student progress on their scholastic performance. The UM Library Science program should conduct curricular activities that would enhance the ability and competency of the students for exposure and preparation for the board exam. Reviews for the licensure exam must give higher weights on subjects that are weakest in that order so as to maximize success in the exam.

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