

Correlates in the Mock Board Examination and Theoretical Phase of the Dentist Board Licensure Examination in one Private Academic Institution in the Philippines

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Abstract – *The study aimed to explore the correlation between the graduates' performance in the mock board Written Proficiency Examination (WPE) and the Theoretical Phase of the Dentist Licensure Examination (DLE) from 2009 to 2012 in the College of Dentistry of Lyceum of the Philippines University-Batangas. Furthermore, the results of the study can be used to answer questions about the validity of written proficiency examination for making decisions and requirements for graduation of the candidates. Descriptive-correlation type of research method was utilized in the study. Findings indicated that mock board written proficiency examination and the theoretical phase of the Dentist licensure examination had a highly significant relationship in the outcome of the dentist board examinations. Such findings may indicate that mock board can be a good diagnostic tool to identify the graduates' strength and weakness before taking the board examination.*

Keywords – *Dentist Licensure Examination, Mock Board, Written Proficiency Examination*

INTRODUCTION

Dentistry is a program of study wherein knowledge is not the only component but also must have great manual dexterity to maneuver the concept of the study. It is a six year degree program composing of two year preparatory to dentistry and another four years of dentistry proper. During the first two year course preparatory, the students take general course subject as well as introduction to medical subjects as groundwork for a more complex field of study. And the four years dentistry proper both medical and dental subjects were given emphasis. During these years they were trained to handle first the mannequins and later, to live patients when professors see that they were already prepared to handle the case. Knowledge and manual dexterity are the keys to be a professional dentist. Thus it is the aim of the college to prepare students to these arduous qualifications that they must attain before graduation where mock board is an essential part of the regiment.

In order to practice dentistry, a dentist licensure examination must be passed by the graduates. The licensure process is regulated by the Professional Regulation Commission (PRC) and validated by the

Board of Dentistry in the Philippines for the purpose of protecting the integrity of the profession and the health and welfare of the public.

Licensure examination is a very important prerequisite in order for a graduate to practice one's profession. It is a standard or criteria which must be met by a graduate to pursue or fulfill his or her dreams to become a recognized professional on his field of expertise. The license gives the necessary protection to patient and be assured that he is being treated by a professional who is well equipped with knowledge and skills needed to cure specific dental health problems.

The dentist licensure examination is consisting of two parts: theoretical and practical phase. The theoretical phase is consists of subjects that are clustered together or grouped in interdisciplinary manner. The practical phase is structured by different dental discipline. The percentage equivalent of the theoretical phase is 60 percent and 40percent for the practical phase of the examination. The Board of Dentistry released a table of specifications with percentage of each subject/discipline cluster after each examination. For the theoretical phase, the examinee

must obtain a passing percentage of 75 percent with no grade below 50 percent in each subject cluster.

Relative to this, the Philippine Dental Act of 2007 also known as Republic Act 9484 [1], was issued to regulate the practice of dentistry, dental hygiene and dental technology in the Philippines, repealing for the purpose of Republic Act No. 4419, otherwise known as “an Act to regulate the practice of dentistry in the Philippines and for other purposes” and Republic Act No. 768, otherwise known as “an Act to regulate the practice of dental hygienists in the Philippines and for other purposes” and appropriating funds and was signed into law last February 19, 2007 by former Pres. Gloria Macapagal-Arroyo.

Under this Act, all applicants for the practice of dentistry must undergo a licensure examination to be given by the Board of Dentistry. To be qualified for licensure examination for dentist, he/she must be a citizen of the Philippines, or if foreigner, must prove that the country of which he/she is a subject or citizen permits Filipino dentist to practice within its territorial jurisdiction on the same basis as the subjects or citizen of such country, has not been convicted of an offense involving moral turpitude, a graduate of a recognized and legally constituted university, college, school or institute with a degree of doctor of dental medicine or its equivalent, and has completed the refresher course required after failing three (3) consecutive licensure examinations.

In 2007, the PRC Board of Dentistry implemented Board Resolution no. 7 wherein the examinees for the dentist licensure examination to first pass its theoretical/written phase before they are allowed to take the practical phase provided that pursuant to Board resolution no. 277 series of 1989 and at the time of adoption of the resolution, examinees who have passed the theoretical phase shall be allowed to take only the practical phase and examinees who passed the practical phase shall still be allowed to take the phase only up to 2007. From the school year 2008 to 2013, the college had been consistent in attaining the 100% passing in the board exam and has produced two (2) Top 10 board passers.

With these developments, LPU College of Dentistry had implemented mock board examinations which consist of practical phase and written proficiency examination (WPE). These examinations are also prerequisite for graduation and part of the Clinical Dentistry IV of the graduating students.

As the College is adopting an outcome-based education model, a complete range of learning

outcomes and performance is assessed. There are occasions that it is possible for dental graduates to compensate for relatively poor performance in one or other aspects/subjects by performing better in other areas.

OBJECTIVES OF THE STUDY

This study analyzed the correlation of the performance of the Dentistry graduates of the LPU – Batangas in the theoretical phase of the dentist licensure examination and the mock board written proficiency examination for the year 2010-2013. Findings of the study served as a basis to propose necessary enhancement for the improvement of the performance in the licensure examination of the graduates.

METHODS

Research Design

This study used a descriptive-correlational type of research to assess the relationship between the mock board examination and the dentist licensure examination of the graduates. Descriptive survey method is appropriate for data derived from simple observational situation, whether these are actually physically observed through the use of a questionnaire or poll techniques [2].

Subjects

The participants of this study are the 37 graduates of LPU College of Dentistry from 2009 to 2013.

Procedure

A letter of request to conduct the study was submitted to the dean of LPU College of Dentistry to use the records of the mock board examination results and the dentist board examination result per subject. Documentary analysis was utilized to obtain the primary data needed for the study in terms of mock board examination and the dentist licensure examination results per subject of the graduates of 2009-2013 in the theoretical phase.

Data Analysis

The data gathered were tallied, encoded and interpreted using descriptive statistics which include frequency distribution ranking and Pearson product moment correlation to test the relationship between the mock board and DLE in the theoretical phase.

RESULT AND DISCUSSION

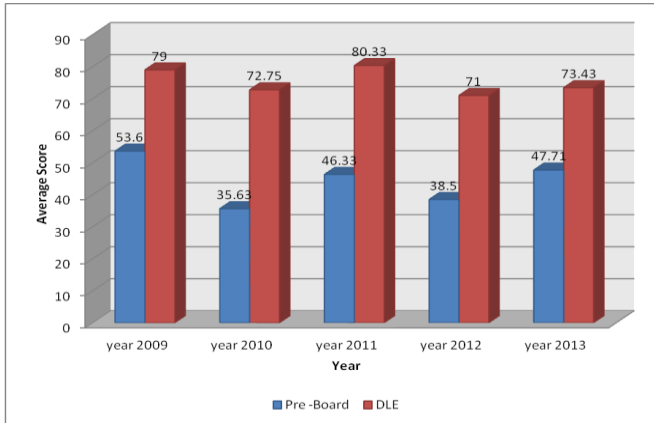


Figure 1. Performance of Dentistry Graduates of Gen. Anatomy and Physiology, Gen. Microscopic Anatomy and Gen. Pathology

Figure 1 showed the performance of the Dentistry graduates on General Anatomy and Physiology, General Microscopic Anatomy and General Pathology from school year 2009 to 2013. The figure presented that the highest grade of the graduates in the preboard was 57.67 in 2011, followed by 57.4 in 2009, 52.14 in 2013, 45 in 2012 and the lowest was 44.88 in 2010. While the result of the Dentist licensure examination showed that the highest was 79 percent in 2011 followed by 77.75 percent in 2012, 77.6 percent in 2009, 75.14 percent in 2013 and the lowest was 74.5 percent in 2010. The highest and the lowest result in the mock board and DLE were similar for the year 2011 and 2010.

This implied that the result in the mock board for the subjects General Anatomy, General Physiology, General Microscopic Anatomy and General Pathology was consistent with the result of the DLE. Furthermore, the result showed that the higher the result of the mock board, the greater is the chance to pass the dentist licensure examination.

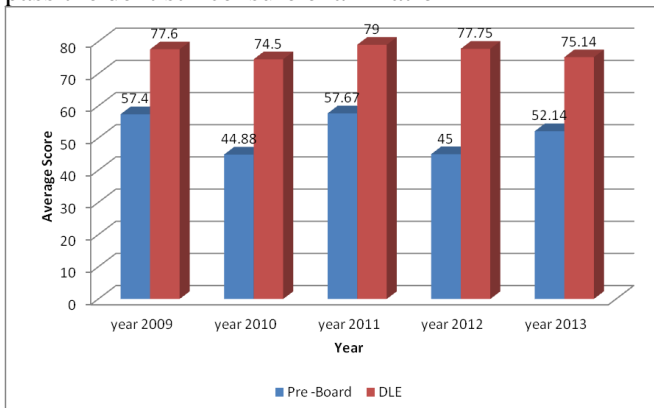


Figure 2 Performance of Dentistry Graduates on the Principles of Medicine and Pharmacology

Figure 2 showed the performance of the Dentistry graduates on the subjects Principles of Medicine and Pharmacology the school year 2009 to 2013. The highest grade in the preboard of the graduates was 53.6 in 2009 followed by 47.7 in 2013, 46.33 in 2011, 38.5 in 2012 and the lowest was 35.63 in 2010. While the highest grade in the dentist board examination was 80.33 percent in 2011 followed by 79 percent in 2009, 73.43 percent in 2013, 72.75 percent in 2010 and the lowest was 71 percent in 2012 followed by 72.75 percent in 2010. The result presented that there was a difference in the year when the graduates got their highest and lowest grades in the mock board and dentist licensure examination. But in the overall viewing of the figure, a parallel result between the two examinations was observed.

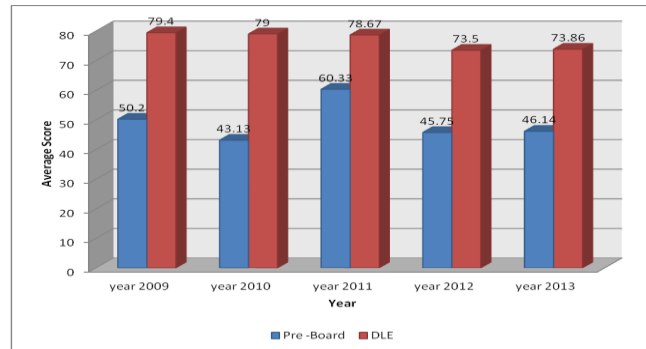


Figure 3. Performance of Dentistry Graduates on Oral Anatomy and Physiology, Oral Microscopic Anatomy and Oral Pathology

Figure 3 showed the performance of the Dentistry graduates on Oral Anatomy and Physiology, Oral Microscopic Anatomy and Oral Pathology for the school year 2009 to 2013. The highest result in the mock board was 60.33 in 2011 followed by 50.2 in 2009, 46.14 in 2013, 45.79 in 2012 and the lowest was 43.13 in 2010. While in the Dentist licensure examination, the highest percentage was 79.4 in 2009 followed by 79 percent in 2010, 78.67 percent in 2011, 73.86 percent in 2013 and the lowest percentage was 73.5 percent in 2012. The outcome of the figure presented a difference in the grades obtained by the graduates when viewed with the highest and lowest grades.

The result implied that the mock board examination exhibit a far more challenging concept compared to DLE but can also be used as a diagnostic tool as to the strength and weakness of the graduates before taking the board examination as well as for its preparation [3].

Figure 4 showed the performance of the Dentistry graduates on restorative dentistry and dental materials for the school year 2009 to 2013. The highest result in the mock board was 61.13 in 2010 followed by 59.67 in 2011, 56.5 in 2012, 54.4 in 2009 and the lowest was 51.29 in 2013. While in the Dentist licensure examination, the highest percentage was 79.71 in 2013 followed by 79.33 percent in 2011, 76.2 in 2009, 76 percent in 2012, and the lowest percentage was 74.25 percent in 2010. The result presented that the highest grade in the mock board was the lowest grade in the Dentist licensure examination when compared to the year when it was taken and vice versa.

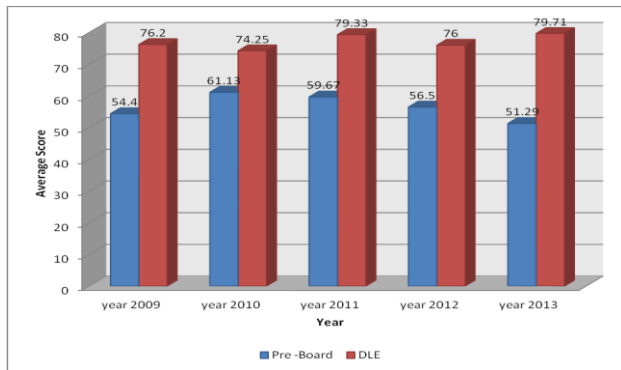


Figure 4. Performance of Dentistry Graduates on Restorative Dentistry and Dental Materials

This implied that the graduates' readiness in the Dentist licensure examination can be monitored using the results of the preboard. Preparation for subjects where the highest or lowest result can be an insight on which the graduates should further study. A good preparation are contributing factors that could lead to success in the DLE [3].

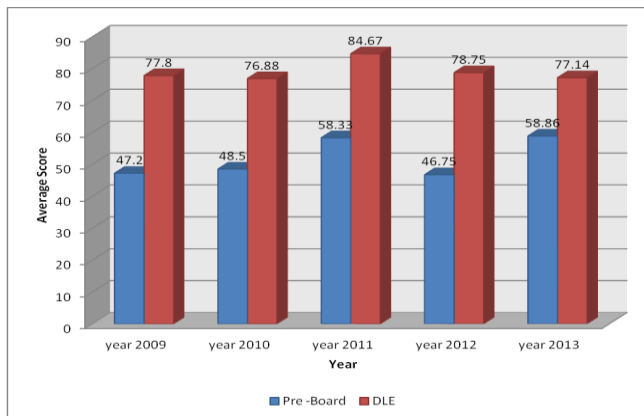


Figure 5. Performance of Dentistry Graduates on FPD, RPD and CD

Figure 5 showed the performance of the Dentistry graduates on Fixed Partial Denture (FPD), Removable

Partial Denture (RPD) and Complete Denture (CD) for the school year 2009 to 2013. The highest result in the mock board was 58.86 in 2013 followed by 58.33 in 2011, 48.5 in 2010, 47.2 in 2009 and the lowest was 46.75 in 2012. While in the Dentist licensure examination, the highest percentage was 84.67 in 2011 followed by 78.75 percent in 2012, 77.8 percent in 2009, 77.14 percent in 2013 and the lowest percentage was 76.88 percent in 2010. The result presented that the highest grade in dentist licensure examination was second to the highest in the mock board of the same year.

This implied that the mock board can be a determining factor on where the graduates possess strength or weakness in the dentist licensure examination. The result can be used as baseline data on which the graduates should focus during the review not neglecting other subjects that are equally important also. This showed that mock boards have a substantial sensitivity and positive predictive value [4].

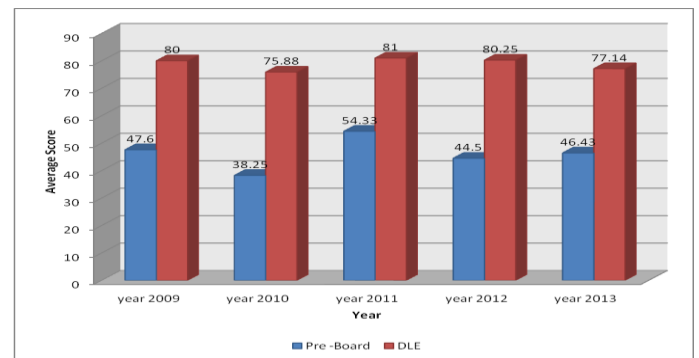


Figure 6. Performance of Dentistry Graduates on Oral Diagnosis, Roentgenology and Hospital Dentistry

Figure 6 showed the performance of the Dentistry graduates on Oral Diagnosis, Roentgenology and Hospital Dentistry for the school year 2009 to 2013. The highest result in the mock board was 54.33 in 2011 followed by 47.6 in 2009, 46.5 in 2013, 46.43 in 2013 and the lowest was 38.25 in 2010. While in the Dentist licensure examination, the highest percentage was 81 percent in 2011 followed by 80.25 percent in 2012, 80 percent in 2009, 77.14 percent in 2013 and the lowest percentage was 75.88 percent in 2010. The result obtained in the figure collaborated with the highest and lowest result of the preboard and the dentist licensure examination with the year it was taken.

This implied that there is a strong link between the result of the mock board and dentist licensure examination.

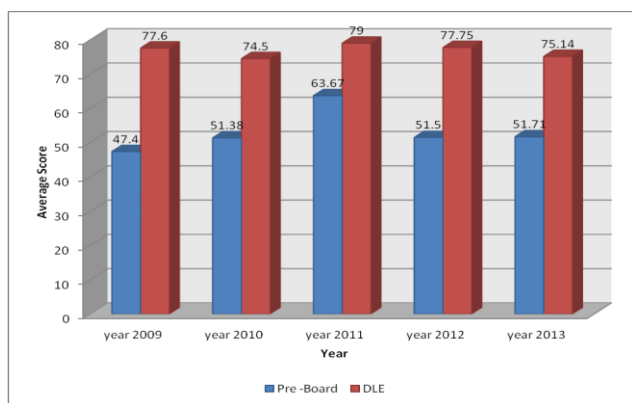


Figure 7. Performance of Dentistry Graduates on Endodontics, Periodontics and Orthopedodontics

Figure 7 showed the performance of the Dentistry graduates on Endodontics, Periodontics and Orthopedodontics for the school year 2009 to 2013. The highest result in the mock board was 63.67 in 2011 followed by 51.71 in 2013, 51.5 in 2012, 51.38 in 2010 and the lowest was 47.4 in 2009. While in the Dentist licensure examination, the highest percentage was 79 percent in 2011 followed by 77.75 percent in 2012, 77.6 percent in 2009, 75.14 percent in 2013 and the lowest percentage was 74.5 percent in 2010. The figure assessed that the highest grade in the preboard and the dentist licensure examination was the same in 2011.

This implied that the outcome of the mock board cannot only assess the readiness of the graduates for the board examination but can be a good predictor to the result of the board examination.

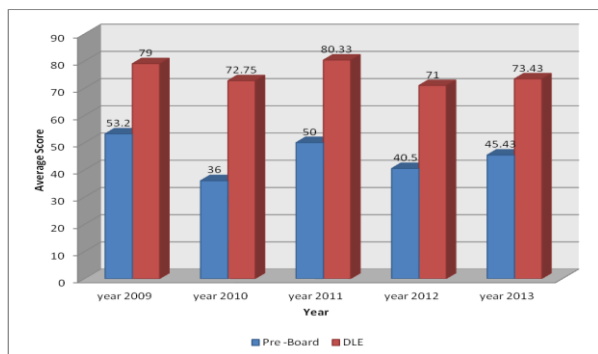


Figure 8. Performance of Dentistry Graduates on Anesthesiology and Surgery

Figure 8 showed the performance of the Dentistry graduates on Anesthesiology and Surgery for the school year 2009 to 2013. The highest result in the mock board was 53.2 in 2009 followed by 50 in 2011, 45.43 in 2013, 40.5 in 2012 and the lowest was

36 in 2010. While in the Dentist licensure examination, the highest percentage was 80.33 percent in 2011 followed by 79 percent in 2009, 73.43 percent in 2013, 72.75 percent in 2010 and the lowest percentage was 71 percent in 2012. The highest grade in the DLE was second to the highest in the mock board examination.

This implied that mock board can be diagnostic tool as to the strength and weakness of the graduates in preparation to the board examination.

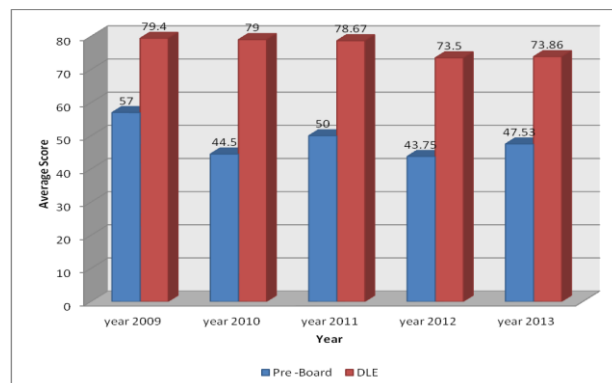


Figure 9. Performance of Dentistry Graduates on Community Dentistry, Dental Jurisprudence and Nutrition

Figure 9 showed the performance of the Dentistry graduates on Community Dentistry, Dental Jurisprudence and Nutrition for the school year 2009 to 2013. The highest result in the mock board was 57 in 2009 followed by 50 in 2011, 47.53 in 2013, 44.5 in 2010, and the lowest was 43.75 in 2012. While in the DLE, the highest percentage was 79.4 percent in 2009 followed by 79 percent in 2010, 78.67 percent in 2011, 73.86 percent in 2013 and the lowest percentage was 73.5 percent in 2012. The highest and the lowest result in the mock board and DLE were the same for 2009 and 2012.

This suggests that mock board examination can be an analytical tool as to the graduates' preparation for the board examination and a good prerequisite for graduation.

Table 1 presented the relationship between the mock board written proficiency examination and theoretical board examination result of dental graduates. Based from the result, there is a significant relationship between the graduates' performance on mock board and DLE. This was observed from the obtained r-values which indicate moderate positive correlation and the obtained p-values of less than 0.05.

Table 1. Relationship Between the Pre-board Written Proficiency Examination and Theoretical Board Examination Result of Dental Graduates

Pre-Board		dsubj_1	dsubj_2	dsubj_3	dsubj_4	dsubj_5	dsubj_6	dsubj_7	dsubj_8	dsubj_9
psubj_1	r-value	0.534**	0.637**	0.293	0.366	.555**	.498**	.534**	.637**	0.293
	p-value	0.004	0	0.139	0.06	0.003	0.008	0.004	0	0.139
	Interpretation	S	HS	NS	NS	S	S	S	HS	NS
psubj_2	r-value	0.488**	0.546**	0.204	0.339	.463	.478	.488**	.546**	0.204
	p-value	0.010	0.003	0.308	0.083	0.015	0.012	0.01	0.003	0.308
	Interpretation	S	S	NS	NS	S	S	S	S	NS
psubj_3	r-value	0.559**	0.578**	0.077	0.244	.569**	.455	.559**	.578**	0.077
	p-value	0.002	0.002	0.704	0.22	0.002	0.017	0.002	0.002	0.704
	Interpretation	S	S	NS	NS	S	S	S	S	NS
psubj_4	r-value	0.159	0.132	.476	0.169	0.119	0.22	0.159	0.132	.476
	p-value	0.429	0.513	0.012	0.399	0.553	0.271	0.429	0.513	0.012
	Interpretation	NS	NS	S	NS	NS	NS	NS	NS	S
psubj_5	r-value	0.440	0.425	0.193	.427	.512	0.346	.440	.425	0.193
	p-value	0.022	0.027	0.336	0.026	0.006	0.077	0.022	0.027	0.336
	Interpretation	S	S	NS	S	S	NS	S	S	NS
psubj_6	r-value	0.622	0.597	0.161	.395	.637	.550	.622	.597	0.161
	p-value	0.001	0.001	0.423	0.042	0	0.003	0.001	0.001	0.423
	Interpretation	S	S	NS	S	HS	S	S	S	NS
psubj_7	r-value	0.364	0.315	0.102	0.238	.466*	0.247	0.364	0.315	0.102
	p-value	0.062	0.110	0.614	0.232	0.014	0.214	0.062	0.11	0.614
	Interpretation	NS	NS	NS	NS	S	NS	NS	NS	NS
psubj_8	r-value	0.504**	.530**	0.164	0.333	.475	.424	.504**	.530**	0.164
	p-value	0.007	0.005	0.415	0.09	0.012	0.027	0.007	0.005	0.415
	Interpretation	S	S	NS	NS	S	S	S	S	NS
psubj_9	r-value	0.534	.678	.420	.417	.617	.523	.534	.678	.420
	p-value	0.004	0	0.029	0.031	0.001	0.005	0.004	0	0.029
	Interpretation	S	HS	S	S	S	S	S	HS	S

Legend: Significant at p -value < 0.05; Subj 1= Gen. Anatomy and Physiology, Gen. Microscopic Anatomy and Gen. Pathology; Subj 2= Principles of Medicine, and Pharmacology; Subj 3= Oral Anatomy and Physiology, Oral Microscopic Anatomy, and Oral Pathology; Subj 4= Restorative Dentistry and Dental Materials; Subj 5= FPD, RPD and CD; Subj 6= Oral Diagnosis, Roentgenology and Hospital Dentistry; Subj 7= Endodontics, Periodontics, and Orthopedic; Subj 8= Anesthesiology and Surgery; Subj 9= Community Dentistry, Dental Jurisprudence, and Nutrition

This means that the null hypothesis of no significant relationship between the mock board and DLE was rejected. Mock board examination was a prerequisite for graduation in the College of Dentistry. It was used by the department for the graduates to review and prepare for the DLE. With the result of the mock board, graduates were advised on their weaknesses and strength in order for them to focus on the subjects where they have difficulty in passing.

This way graduates are more confident in taking the DLE as seen in the result of the board examination where two topnotchers were produced in the inclusive and 100 percent passing were obtained for the fresh graduates.

As revealed from the table, mock board result on Gen. Anatomy and Physiology, Gen. Microscopic Anatomy and Gen. Pathology (p -value = 0.004) was

correlated to the result of the DLE, same was also observed on Principles of Medicine, and Pharmacology (p -value = 0.004); FPD, RPD and CD (p -value = 0.006); Oral Diagnosis, Roentgenology and Hospital Dentistry (p -value = 0.003); Anesthesiology and Surgery (p -value = 0.005) and Community Dentistry, Dental Jurisprudence, and Nutrition (p -value = 0.029). The result implied that the performance in the DLE was affected by their performance in mock board examination. In addition, it showed that the better the performance in the mock board examination, the better the performance they achieved in the licensure exam.

The result implied that mock board could be a good diagnostic tool to see the strength and weaknesses of the graduates before taking the board exam. Mock board could give an overview where the

students should focus in their studies to strengthen where they seemed to have a poor score. This can be an effective guiding tool to further enhance the good standing of the department and produce more top placers in the DLE in the future. Thus, the written proficiency examination of the mock board was a valid tool for making decisions and requirements for graduation of candidates.

The result of the study was in agreement with other studies that mock board had a strong correlation with the result of DLE [3]-[6] but this contradicts the findings of Jesse [7] and Stewart [8] as well as the study of Manalo [9] for the Custom Brokers Board Examination.

CONCLUSION AND RECOMMENDATION

The five-year study of the results of the mock board written proficiency and the theoretical phase of the Dentist licensure examination of the College of Dentistry showed a strong link that can serve as a good diagnostic tool as to the performance of the graduates in the board examination. This further affirms that the implementation of outcome based education (OBE) in the university had a positive influence to the graduates because it provides them with clear objective on what they need to know and skills that they need to display as graduates of the course. The mock board examination results give a clear evaluation if the graduates achieve the intended learning outcome of the program.

There is a significant relationship between the mock board written proficiency and theoretical phase of the dentist licensure examination. Furthermore, the performance in DLE is affected by their performance in mock board examination. In addition, it shows that the better the performance in the mock board examination, the better the performance they achieved in the licensure examination. Thus, the written proficiency examination of the mock board was a valid tool for making decisions and requirements for graduation of candidates.

Curriculum enhancement and development with horizontal and vertical integration of the medical and dental subject can be implemented by the college to further enhance the retention of the knowledge and skills of the graduates. The curriculum should represent a holistic approach to Dentistry, the students should recognize the role of dentistry as a division of the different health services.

It is recommended that multiple choice questions (MCQ's) had undergone appropriate pre and post

analysis. Item distribution should comply with the coverage of each subject cluster in the curriculum devoid of the biases. A panel of mock board theoretical examination should study questions based from the "need to know" basis as well as the probability and evidence that questions are actually given in the actual licensure examination.

It is also recommended using mock board examination to acclimate the students to the actual licensure examination.

The mock board examination can also be used as a tool for assessing the level of intellectual capacity and preparedness of candidates without any prejudice. It can be used both as a predictive mechanism as well as coaching tool for passing the licensure examination.

Further investigation as to the actual board examination experience of the examinees maybe recommended because only documentary analysis was utilized in this study and actual feedback from the examinees would display a wider picture as to the university's best practices in relation to OBE and points to improve to further enhance the program.

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