A Study on the Use of Computer Based English Language Placement Tests as Measurements of English Language Proficiency among University Students

Normah Abdullah[1], Zarina Suriya Ramlan[2], Othman Ismail[3], Norlaila Yahya[4], Fairoz Salleh[5], Noraida Kasim[6]

Akademi Pengajian Bahasa, Universiti Teknologi MARA
40450 Shah Alam, Selangor Darul Ehsan, Malaysia

norma034@salam.uitm.edu.my, zarinas@salam.uitm.edu.my,
othmani@salam.uitm.edu.my, norla130@salam.uitm.edu.my
fairoz@salam.uitm.edu.my, noraida@salam.uitm.edu.my

ABSTRACT

This study reports the use of English Placement Tests (EPTs) supported by an e-engine software to test English language skills in Listening and Reading among new Universiti Teknologi MARA (UiTM) Diploma students of the November 2014-April 2015 cohort. The objective of the study was to exempt students with excellent English language proficiency from taking the University's basic English language course offered in semester one (ELC120/Integrated Language Skills: Listening). Results of the study reveal that the majority of the students (97.5%) did not meet the required scores in both Listening and Reading for exemption to be given. Challenges in the implementation of the test and the participation of the students in the pilot study are discussed. Implications of the study to the University stakeholders are highlighted.

Keywords: computer based language test, assessment, performance, EPT

INTRODUCTION

This paper is primarily concerned with the delivery of a computer based language test. It describes a pilot study of a computer based English Placement Test (CB-EPT) using an e-engine software and supported by UiTM server infrastructure to upload the CB-EPT results. Basically, CB-EPT aimed to examine efficacy of using it as an instrument to indicate the proficiency level of new UiTM Diploma students for the purpose of placement and exemption. It was proposed that the cut-off score for exemption be established at 80% and above while candidates scoring below the 80% mark would follow all the English language courses stipulated by the Academy of Language Studies in UiTM.

The CB-EPT was intended for all newly enrolled Diploma students, estimated at 10,000 students per intake and conducted during orientation week or the first week of course registration. In order to cope with this large number of students taking CB-EPT within a short period of time and test results to be generated immediately to facilitate the registration process for the University English language courses, the CB-EPT was proposed as the best solution to the laborious, costly and time-consuming task of evaluating the proficiency of these new students on an almost immediate basis.

To execute the CB-EPT, the necessary paperwork had to be first put together and endorsed. The 173th UiTM Senate Meeting, dated 9 January 2013, officially endorsed the implementation of CB-EPT by the Academy of Language Studies. The implementation of the CB-EPT at all UiTM campuses commenced in June 2013 using an e-engine software to facilitate the standardization of the test. The Academy was also requested to work with the University Information Technology department with regards to data server connectivity.

The CB-EPT was administered from December 2014 to January 2015 (a duration of two months) on new Diploma students of the November 2014 – April 2015 cohort. Since it was the first CB-EPT exercise given to all newly enrolled full time UiTM Diploma students, the tests were categorized as a pilot study. Students who sat for the tests were allowed to do so on a voluntary basis. A total of thirteen (13) UiTM campuses were involved in this pilot study namely, Sungai Petani, Jengka, Arau, Permatang

Pauh, Segamat, Seri Iskandar, Semarahan, Lendu, Dungun, Kota Kinabalu, Machang, Kuala Pilah and Shah Alam.

The CB-EPT constructed by the Academy has some distinctive features. Firstly, it is a computer based English placement test which comprised Listening, Grammar and Reading comprehension sections. The test utilized a multiple choice question format with three options to choose from. Secondly, the test was designed for new UiTM Diploma students who were mostly students who have just completed the Malaysian national examination known as the *Sijil Pelajaran Malaysia (SPM)* equivalent to O levels. Finally, the CB-EPT was intended to allow newly enrolled Diploma students to be exempted from taking the English language course, ELC120 (Integrated Language Skills: Listening) offered in the first semester of studies.

LITERATURE REVIEW

Since its introduction in the mid-80's, Computer Based Testing (CBT) has gained momentum and proliferated in use due to its efficient administration and better measurement of performance benefits. In comparison to pen and pencil tests, Christensen (1997) states that CBT are favored for their more flexible and individualized test administration, student performance tracking capabilities, immediate test feedback, test/task types variation as well as enhanced test security. Computer based tests which are tests administered by computer in either stand alone or network configuration by other technology devices linked to the Internet have evolved to adopt adaptive formats and multiple computer assisted technology applications to measure performance.

Christensen (1997) however, cautions the need to compare the pen and pencil test to computer based testing before proceeding with the rationale for the use of CBT in English as a second language test for the purpose of placement.

A study by Brantmeier and Vanderplank (2008) revealed that Self-Assessment (SA) pre-test may be used as a reliable determiner for reading placement when it is measured with criterion referenced items. The

possibility of teaming SA items with the placement test would determine the placement of advanced learners while the SA criteria could facilitate the placement of readers with marginal reading scores (readers who score on the border between intermediate and advanced). The SA element could train readers to reflect critically on their L2 reading abilities on a regular basis, and this self-evaluation should be linked with the skills they are working on. Finally, the study also shows the value of SA in predicting performance on language placement tests and performance in class. The study also states further research is needed to address the validity and reliability of self-assessment in the testing, or high-stakes, process.

Another study conducted by Choi, Kim and Boo (2003) was aimed at validating the comparability of Paper Based Language Test (PBLT) and Computer Based Language Test (CBLT) /Computer Adaptive Language Test (CALT). The overall results of construct related validation studies indicate comparability of the subjects' scores across CBLT and PBLT modes. The grammar test showed the strongest comparability, and the reading comprehension test the weakest comparability. The pattern of correlations among subtests, disattenuated correlations, and confirmatory factor analyses support, to a certain extent, that CBLT and PBLT subtests measure the same constructs, thus, justifying that paper and pencil tests can be replaced with computer based tests for language skill measurement.

The application of computer based testing to language particularly second language learning (L2) could be traced to Dunkel (1997) whose work is focused on computer assisted language learning and computer assisted technology (CAT). The issue with the second language (L2) field according to Dunkel was that it was not progressing at par with the general measurement profession. The lagging of computer based second language testing could be attributed to the fact that its testing methods are entrenched in performance based assessment. This form of assessment cannot be easily worked into a computerized administration as it can be with more traditional test formats. Hence, practitioners who intend to use CBT in English as a second language testing for placement purposes have to consider the following elements; Receptive response items - including multiple choice, true-false, and matching items - are fairly easy to adapt to the computer assisted testing medium. In today's world, there are many authoring tools that can create tests of this type. Unfortunately, the more interesting types of

language tasks (e.g., role plays, interviews, compositions, oral presentations) prove much more difficult to develop for computer assisted testing (Brown, 1997).

METHODOLOGY

The Academy of Language Studies, UiTM embarked on a pilot study of CB-EPT tests to examine the English language proficiency of new full time Diploma students from December 2014 to January 2015. The test was under the authority of the English Language Department, of the Academy at UiTM Shah Alam and administered by the Academy's departments across thirteen (13) UiTM campuses located all over Malaysia. The Coordinators in Shah Alam and Heads or campus Coordinators were responsible for administering the CB-EPT pilot tests. Participants were newly enrolled full time UiTM Diploma students, aged between 18-20 years, who were required to pass three compulsory English language courses. The CB-EPT was used to assess the English language ability and proficiency of these students as an indicator for exemption from the English language course, ELC120 (Integrated Language Skills: Listening) offered in the first semester of studies.

The pilot tests comprised two sections, Listening, and Grammar and Reading comprehension. The time given to complete the tests was 90 minutes (30 minutes for Listening, and 60 minutes for Grammar and Reading comprehension). Depending on the language ability of the students, some completed the tests in less than 90 minutes and others did not complete it within the time given. Sixty (60) sets of Listening comprehension questions were constructed and divided into Set A, Set B and Set C. The questions comprised short news reports, dialogues and talks. In the Grammar section, twelve (12) sets of cloze passages were constructed which totaled 60 questions. Reading comprehension questions were constructed in 15 sets totaling 60 questions as well. The CB-EPT tests employed the multiple choice format for time efficiency. Specifically, each question in the Listening, and Grammar and Reading comprehension tests provided three options and students were required to choose the best answer. The CB-EPT scores were counted based on the number of correct answers without any difference in weightage among the questions. All the

test questions were vetted following the Academy's quality check (SOP) for setting of examination papers. The test was computerized and questions were randomized using the e-engine software. A total of 3,986 students took the Listening Test; while, 3,963 students sat for the Grammar and Reading Comprehension Test.

As described, the main purpose of the piloted CB-EPT tests was to measure the English language proficiency of newly admitted full time Diploma students. The CB-EPT test results would be used to decide if the students could be exempted if they got a score of 80% and above on the test. Due to the large number of students, a computer based test was employed enabling the test results to be generated automatically once the test was completed. In measuring and analyzing the test results, the computer based test scores were tabulated and examined using ANOVA and Bonferroni Post Hoc test of multiple comparison.

FINDINGS

Listening Comprehension Test (LC-EPT)

Table 1 illustrates the breakdown of students' performance in the LC-EPT test. The test comprised 3 sections – Section A: Listening to five short news reports (5 marks); Section B: Listening to a talk/speech (8 marks); and Section C: Listening to an interview (7 marks). The total score for the LC-EPT test was 20. Students scored between 4 to 19 marks out of the possible 20 marks. Furthermore Table 1 shows that a total of 1,732 (43.5%) students scored between 4 marks to 9 marks out of 20. These students failed even to obtain a passing grade. A total of 2,254 (56.4%) students, on the other hand, scored between 10 marks to 19 marks. Overall, only 417 (10.5%) students managed to score 70% and above in the LC-EPT test. Their scores ranged from 14 to 19. Similarly, only 101 (2.5%) students scored 80% or more in the same test with marks ranging from 16 to 19.

Table 1: Students' Performance in the Listening Comprehension Test (LC-EPT)

Campus	4	5	6	7	8	9	10	11	12	13
Sungai Petani	4	3	13	14	28	27	33	29	23	5
Jengka	1	3	4	16	29	30	32	23	18	20
Arau	0	4	10	12	18	25	29	32	34	12
Pematang Pauh	1	3	7	9	16	12	9	10	14	3
Segamat	8	12	19	35	47	60	72	53	65	29
Seri Iskandar	1	10	22	24	41	35	47	42	28	24
Shah Alam	2	3	9	8	14	15	19	12	7	12
Semarahan	3	6	16	21	25	32	18	21	15	10
Lendu	3	10	24	62	60	85	94	86	88	59
Dungun	4	16	26	35	50	73	66	56	57	30
Kota Kinabalu	6	12	25	26	60	63	68	44	51	31
Machang	4	24	45	52	71	69	63	86	42	28
Kuala Pilah	0	0	6	16	26	22	18	25	23	22
Total Students = 3986	37	106	226	330	485	548	568	519	465	285
Percentage = 100%	0.9%	2.7%	5.7%	8.3%	12.2%	13.7%	14.2%	13.0%	11.7%	7.2%

LC-EPT Scores (continue)										
Campus	**14**	**15**	**16**	**17**	**18**	**19**				
Sungai Petani	7	5	6	1	0	0				
Jengka	14	9	5	4	2	0				
Arau	14	10	2	1	0	1				
Pematang Pauh	3	3	0	0	0	0				
Segamat	28	18	6	2	1	0				
Seri Iskandar	8	10	8	1	0	0				
Shah Alam	3	3	0	0	0	0				
Semarahan	9	5	2	2	0	0				
Lendu	40	18	7	4	2	0				
Dungun	20	7	6	3	1	0				
Kota Kinabalu	24	4	6	2	0	0				
Machang	15	11	6	2	0	1				
Kuala Pilah	13	15	11	4	2	0				

Total Students = 3986	198	118	65	26	8	2			
Percentage = 100%	5.0%	3.0%	1.6%	0.7%	0.2%	0.1%			

Table 2 illustrates the number of students by campus and their mean ($\bar{x}=\frac{\sum fx}{\sum f}$) scores as well as the standard deviation (s). Kuala Pilah campus reported the highest students' performance in LC-EPT with the mean score of 11.1 (N=203, $\bar{x}=\frac{\sum fx}{\sum f}$= 11.1, s=2.9). Four campuses reported mean scores of 10.2 to 10.6. These campuses were Jengka (N=210, $\bar{x}=\frac{\sum fx}{\sum f}$= 10.6, s=2.8), Arau (N=204, $\bar{x}=\frac{\sum fx}{\sum f}$= 10.6, s=2.6), Lendu (N=642, $\bar{x}=\frac{\sum fx}{\sum f}$= 10.3, s=2.6), and Segamat (N=455, $\bar{x}=\frac{\sum fx}{\sum f}$= 10.2, s=2.7). All other campuses reported mean scores of less than 10.

Table 2: Number of Students by Campus, Mean ($\bar{x}=\frac{\sum fx}{\sum f}$) Scores and Standard Deviation (s)

Campus	Mean ($\bar{x}=\frac{\sum fx}{\sum f}$)	N	Std. Deviation (s)
Sungai Petani	9.8	198	2.6
Jengka	10.6	210	2.8
Arau	10.6	204	2.6
Pematang Pauh	9.5	90	2.5
Segamat	10.2	455	2.7
Seri Iskandar	9.9	301	2.7
Shah Alam	9.6	107	2.6
Semarahan	9.5	185	2.8
Lendu	10.3	642	2.6
Dungun	9.9	450	2.6
Kota Kinabalu	9.9	422	2.6
Machang	9.5	519	2.6
Kuala Pilah	11.1	203	2.9
Total	10.0	3986	2.7

An ANOVA was run to see the differences among students' performance across campuses (refer Table 3). Even though the ANOVA reported significant differences between groups, the Bonferroni Post Hoc test of multiple comparison (Table 4) showed that only the Kuala Pilah campus recorded the most significant differences across other campuses, with the exception of the Jengka and Arau campuses.

Table 3: An ANOVA Test Comparing Students' Performance in LC-EPT across Campuses

LC-EPT Scores	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	705.9	12	58.8	8.439	.000
Within Groups	27692.4	3973	7.0		
Total	28398.2	3985			

Table 4: Bonferroni Post Hoc Test of Multiple Comparison

Dependent Variable: LC-EPT Scores Bonferroni Campuses		Mean Difference (I-J)	Std. Error	Sig.
Machang	Jengka	-1.08293*	0.22	.000
	Arau	-1.06067*	0.22	.000
	Segamat	-.69795*	0.17	.003
	Lendu	-.84942*	0.16	.000
Semarahan	Jengka	-1.05727*	0.27	.006
	Arau	-1.03500*	0.27	.009
	Lendu	-.82376*	0.22	.015

Kuala_Pilah	Sungai Petani	1.27467*	0.26	.000
	Jengka	0.55	0.26	1.000
	Arau	0.57	0.26	1.000
	Pematang Pauh	1.63426*	0.33	.000
	Segamat	.93194*	0.22	.002
	Seri Iskandar	1.20953*	0.24	.000
	Shah Alam	1.50633*	0.32	.000
	Semarahan	1.60423*	0.27	.000
	Lendu	.78047*	0.21	.019
	Dungun	1.22537*	0.22	.000
	Kota Kinabalu	1.24638*	0.23	.000
	Machang	1.62990*	0.22	.000

Grammar (Cloze Passage) and Reading Comprehension Test (CZRC-EPT)

Table 5 illustrates the breakdown of students' performance in the CZRC-EPT test. The test comprised 2 sections – Section A: Two short cloze passages (10 marks); and Section B: five short Reading Comprehension passages (20 marks). The total score for the CZRC-EPT test is 30. Students scored between 5 to 28 marks out of the possible 30 marks.

Table 5 shows that a total of 2,014 (50.8%) students scored between 5 marks to 14 marks out of 30. These students failed even to obtain a passing grade. A total of 1,949 (49.2%) students, on the other hand, scored between 15 marks to 28 marks. Overall, only 252 (6.4%) students managed to score 70% and above in the CZRC-EPT test. Their scores ranged from 22 to 28. Similarly, only 98 (2.5%) students scored 80% or more in the same test with marks ranging from 24 to 28.

Table 5: Students' Performance in the Grammar and Reading Comprehension Test (CZRC-EPT)

	CZRC-EPT Scores											
Campus	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Sungai Petani	1	0	3	2	6	11	11	25	23	19	16	29
Jengka	0	1	4	4	8	8	16	12	15	18	22	20
Arau	0	0	1	1	4	8	10	18	14	20	24	27
Pematang Pauh	0	0	2	2	5	15	16	9	11	20	6	9
Segamat	0	2	4	12	19	22	31	41	54	36	50	41
Seri Iskandar	1	1	1	1	6	16	12	23	30	31	21	20
Shah Alam	0	4	1	3	5	8	15	9	16	17	13	11
Semarahan	1	2	0	3	6	7	17	14	20	19	22	19
Lendu	0	0	5	13	22	35	53	55	76	57	67	53
Dungun	1	2	1	9	14	26	27	37	39	40	49	45
Kota Kinabalu	0	3	7	14	24	32	46	39	42	40	33	35
Machang	1	6	6	15	31	33	46	58	60	61	35	34
Kuala Pilah	0	0	1	6	6	10	9	14	17	22	18	17
Total Students = 3963	5	21	36	85	156	231	309	354	417	400	376	360
Percentage = 100%	0.1%	0.5%	0.9%	2.1%	3.9%	5.8%	7.8%	8.9%	10.5%	10.1%	9.5%	9.1%

	CZRC-EPT Scores (continued …)											
Campus	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**Total**
Sungai Petani	13	19	11	0	7	5	1	1	2	0	0	1	206
Jengka	18	17	17	4	9	5	4	2	2	0	3	0	209
Arau	14	10	10	6	3	3	6	4	1	0	0	0	184
Pematang Pauh	5	3	4	5	0	3	3	1	0	0	1	0	120
Segamat	38	20	23	21	14	11	9	0	3	2	2	0	455
Seri Iskandar	26	14	13	12	5	5	1	2	0	1	1	0	243
Shah Alam	4	7	6	10	3	4	1	1	0	0	0	0	138
Semarahan	21	11	4	6	6	5	4	1	0	1	0	0	189
Lendu	53	43	32	27	18	14	11	4	7	4	4	0	653
Dungun	22	17	27	18	9	6	4	5	2	2	0	1	403
Kota Kinabalu	28	26	15	11	9	13	6	5	4	1	0	0	433

Machang	33	28	22	16	13	14	5	8	2	2	0	0	529
Kuala Pilah	12	12	7	7	17	8	3	7	5	0	1	2	201
Total Students = 3963	287	227	191	143	113	96	58	41	28	13	12	4	3963
Percentage = 100%	7.2%	5.7%	4.8%	3.6%	2.9%	2.4%	1.5%	1.0%	0.7%	0.3%	0.3%	0.1%	100.0%

Table 6 illustrates the number of students by campus and their mean ($\bar{x}=\frac{\sum fx}{\sum f}$) scores as well as the standard deviation (s). Again, Kuala Pilah campus reported the highest students' performance in CZRC-EPT with the mean score of 16.0 (N=201, $\bar{x}=\frac{\sum fx}{\sum f}$=16.0, s=4.6). Three campuses reported mean scores of 15.0 to 15.4. These campuses were Jengka (N=209, $\bar{x}=\frac{\sum fx}{\sum f}$=15.4, s=4.2), Arau (N=184, $\bar{x}=\frac{\sum fx}{\sum f}$=15.4, s=3.6); and Lendu (N=653, $\bar{x}=\frac{\sum fx}{\sum f}$=15.0, s=4.0), All other campuses reported mean scores of less than 15.

Table 6: Number of Students by Campus, Mean ($\bar{x}=\frac{\sum fx}{\sum f}$) Scores and Standard Deviation (s)

Campus	CZRC-EPT Scores		
	Mean ($\bar{x}=\frac{\sum fx}{\sum f}$)	N	Std. Deviation (s)
Sungai Petani	14.8	206	3.7
Jengka	15.4	209	4.2
Arau	15.4	184	3.6
Pematang Pauh	13.9	120	3.9
Segamat	14.9	455	3.9
Seri Iskandar	14.9	243	3.6
Shah Alam	14.3	138	4.0
Semarahan	14.9	189	3.7
Lendu	15.0	653	4.0
Dungun	14.8	403	3.8
Kota Kinabalu	14.2	433	4.1
Machang	14.2	529	4.0
Kuala Pilah	16.0	201	4.6
Total	14.8	3963	4.0

An ANOVA was run to see the differences among students' performance across campuses (refer Table 7). Even though, the ANOVA reported significant differences between groups, the Bonferroni Post Hoc test of multiple comparison (Table 8) shows that only the Kuala Pilah campus recorded the highest significant difference across six other campuses - Pematang Pauh, Segamat, Shah Alam, Dungun, Kota Kinabalu and Machang. Similarly, the Machang campus also indicated significant differences across 4 other campuses – Jengka, Arau, Lendu and Kuala Pilah.

Table 7: An ANOVA Test Comparing Students' Performance in CZRC-EPT across Campuses

CZRC-EPT Scores	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	937.6	12	78.1	5.0	.000
Within Groups	61903.5	3950	15.7		
Total	62841.1	3962			

Table 8: Bonferroni Post Hoc Test of Multiple Comparison

Dependent Variable: CZRC_Scores Bonferroni				
(I) Campus		Mean Difference (I-J)	Std. Error	Sig.
Jengka	Kota Kinabalu	1.18499*	.33343	.030
Kota Kinabalu	Jengka	-1.18499*	.33343	.030
Machang	Jengka	-1.21010*	.32343	.014
	Arau	-1.16753*	.33882	.045
	Lendu	-.83250*	.23157	.026
	Kuala Pilah	-1.81335*	.32802	.000
Kuala Pilah	Pematang Pauh	2.11828*	.45669	.000
	Segamat	1.15501*	.33528	.045
	Shah Alam	1.69111*	.43764	.009
	Dungun	1.21839*	.34184	.029
	Kota Kinabalu	1.78824*	.33788	.000
	Machang	1.81335*	.32802	.000

* The mean difference is significant at the 0.05 level

CONCLUSION AND DISCUSSION

Several challenges were noted in the administration and implementation of the CB-EPT tests. Shortage of language labs and headphones, inadequate technical support, and low internet connectivity to upload CB-EPT test results were among the issues noted that affected the successful implementation of the pilot study. This leads to the following practical implications. The current IT facilities and infrastructure available can efficiently support the administration of CB-EPT tests for only a small number of candidates or students. The CB-EPT test scores show that a very small number of students achieve the score for exemption and the majority of the students should follow the English language curriculum stipulated by the Academy. Therefore, the Academy needs to consider diversifying and optimizing the usage of e-engine apart from CB-EPT tests, for example, using it to improve on going assessments across all languages offered by the Academy. The randomization of items by the e-engine will ensure that each student receives different questions and options. In addition, with randomization, setting of on going assessment questions will be less taxing on the lecturers. Furthermore, marking and analyzing the results can be generated automatically and immediately.

The overall findings of the pilot study also show that the validity and reliability of the CB-EPT tests are strong. In other words, the scoring of the students' performances by the test items in the CB-EPT tests is consistent with a bell-shaped curve with a significant mean of 0.000 (ANOVA and Bonferroni Post Hoc Test) for both Listening, and Grammar and Reading comprehension tests. The statistical evidence provides the basis for several implications and future directions of the utilization of CB-EPT in UiTM. First, the results of the pilot study reveals that only a very small percentage of the students who sat for the CB-EPT tests had achieved the intended score in which exemption would be given, while the majority of the students did not reach the targeted score for exemption. This is an indication that the newly enrolled Diploma students lack both receptive skills of Listening and Reading. The action taken by the Academy in introducing ELC120 (Integrated Language Skills: Listening) in semester 1 and ELC150 (Integrated Language Skills: Reading) in semester 2 is timely and appropriate in addressing this problem.

The second implication is towards return of investment (ROI) of the e-engine. With a very small percentage of students scoring 80% and above, the Academy needs to reconsider and set the target score for exemption at 70%. The CB-EPT test scores for both Listening, and Grammar and Reading comprehension reveal that only 2.5 per cent of the students achieved the targeted score for exemption; while 11% and 7% of the students achieved 70% of the targeted score in Listening, and Grammar and Reading comprehension respectively. Therefore, lowering the target score for exemption to 70 per cent may encourage students who feel that they are proficient to attempt the CB-EPT tests. The Academy should allow them to sit for the CB-EPT tests at a nominal charge and thus, ROI can be achieved. Third, it is obvious that the CB-EPT is the way forward in testing a large number of candidates or students. As supported by the literature on computer based testing, the primary advantages of computer based test delivery include shorter testing time, simultaneous score feedback, and repetitive availability. Electronic delivery (CB-EPT) is cost saving. CB-EPT delivery is less expensive than printing large quantities of testing materials. It also reduces the costs associated with invigilating, marking and entering of marks, verifying and analyzing data. Finally, the future direction for CB-EPT should be to extend the tests to all franchise colleges of UiTM. As such, the ROI will not only be achieved faster; such a move will also generate income for the Academy that can be shared across all campuses which administer the tests.

The Academy plans to conduct a second pilot study with all newly enrolled Diploma students at all UiTM campuses to verify the initial CB-EPT dataset collected. This is because, since participation in the first pilot study was on voluntary basis, there might be a difference in terms of attitude and mindset which may result in a different set of findings.

REFERENCES

Brantmeier, C.A. & Vanderplank,R. (2008). Descriptive and Criterion-Referenced Self-Assessment with L2 Readers.

Brown, J.D. (1997). Computers In Language Testing: Present Research and Some Future Directions. Language Learning & Technology Vol.1,No1, July 1997,pp.44-59

Christensen, C. (1997). The Innovator's Dilemma: When New Technologies Cause Great Firms To Fail. Boston, MA: Harvard Business School Press

Choi, I. C., Kim, K. S., & Boo, J. (2003). Comparability Of A Paper-Based Language Test And A Computer-Based Language Test. *Language Testing*, *20*(3), 295-320.

Dunkel, P. (1999). Considerations In Developing Or Using Second/Foreign Language Proficiency Computer-Adaptive Tests. *Language Learning & Technology*, *2*(2), 77-93.

Dunkel, P. (1997). Computer-Adaptive Testing Of Listening Comprehension: A Blueprint for CAT Development. The Language Teacher Online, 21, 1-8. Retrieved August 15, 1998 from the World Wide Web:http://langue. hyper.chubu.ac.jp/jalt/pub/tlt/97/oct/dunkel.html.

Norris, J. M. (2001). Computer-Adaptive testing: A Primer. *Language Learning & Technology*, *5*(2), 23-27.

Sim, G., Holifield, P., & Brown, M. (2004). Implementation of Computer Assisted Assessment: Lessons from The Literature. *Research in Learning Technology*, *12*(3).

Suvorov, R., & Hegelheimer, V. (2013). Computer Assisted Language Testing. *The Companion to Language Assessment*.