CORRELATES OF STUDY SCORES, PRE-POST PLACEMENT AND MASTERY TEST RESULTS OF JOB ENABLING ENGLISH PROFICIENCY (JEEP) STUDENTS

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ABSTRACT. *Assessing the correlations between the level of the courseware, study scores, post-placement tests, and mastery tests in a computer-assisted language learning course called Job Enabling English Proficiency (JEEP) helps a language teacher understand how the JEEP CALL features work together and how people use them. It also lets the institution's management figure out how well it works. This study is anchored on the social constructivist theory of John Dewey. Using the descriptive type of research, the researcher looked into the frequency of interactions as reflected in the records of 56 students from the Bachelor of Science in Agriculture III taking up JEEP Start 1 at the University of Science and Technology of the Philippines during the first semester of SY 2019-20. Descriptive statistics revealed that respondents have a mean study score of -0.7 (poor), an average post-placement test result of 1.32 (good), and a mastery test result of 84.90 percent. Correlation analysis showed a significant positive correlation (r =.57, p 0.01) with the use of the microphone, headset, and repeat button for language drills and comprehension, which implies that students' study scores increase as courseware's repeat button, microphone, and headset use increase. The positive correlation of the mastery test with courseware module level (r=0.36, p<0.01) and the post-placement test with module level (r = 0.45, p<0.01), imply that students' mastery test results increase as the courseware module level and post placement test increase. The pre- and post-placement test results are significantly correlated, as indicated by r = 0.65 (p 0.01). The post-placement test and test result increment are positively correlated (r =.49, p 0.01); the mastery and post-placement tests are also significantly correlated (r=.45; p<0.01). These findings imply that computer-assisted language learning employed in the Job Enabling English Proficiency course is beneficial in improving students' English language skills. It is recommended that the instructor constantly monitor CALL results captured in the records manager. Administrators may continually provide intensive training on the administration of JEEP courseware and carefully select faculty who will handle the subject.*

Keywords: Mastery Test, Study Scores, Placement Test, Computer Assisted Language Learning, Correlation Analysis

1. INTRODUCTION

With today's advancement in computer technology, computer-assisted language learning (CALL) has become an essential approach to fast-tracking English as a Foreign Language teaching in universities, schools, and institutes [1]. It has become one of the many tools and techniques that could enhance students' English language competencies. It can handle a range of activities and can move students gradually from more accessible to more challenging exercises according to their levels and abilities [2].

The promulgation of technology as a powerful mechanism and test has been widely thought of since the advent of CALL (Computer Assisted Language Learning) [3]. In his study entitled Job Enabling English Proficiency (JEEP) Program: Evaluation of Students' English Proficiency, he concluded that the JEEP Program is effective in developing and enhancing the English proficiency of students in preparation for their future employment, be it globally or locally [4]. *CALL* provides interactive computer activities that enable learners to develop their communicative competence.

The Job Enabling English Proficiency Program (JEEP) has been at the university for more than ten years and is characterized by its computer-assisted language instruction using the DynEd modules, which focus on developing general English skills during the first two years of JEEP Start1 and 2, while the second year, designated JEEP Accelerate, offers a range of English for Specific Purposes (ESP) courses focused on preparation for employment. Adopting the blended approach, students in JEEP Start 1 and 2 spend thirty to forty-five minutes on the courseware, while

the remaining fifteen to twenty minutes are utilized for extension activities facilitated by the teacher.The teacher conducts a series of JEEP orientations prior to exposing students to the hands-on activities using the DynEd courseware. Before the start of class, students take the pre-placement test to generate appropriate courseware and determine the level of modules they will be completing for the entire semester. While on the course of the study, students check their study records to gauge study scores and time spent and monitor mastery test results. While there was a study conducted to measure the JEEP implications for students' employability and academic performance, there was no study explicitly conducted on the computer-assisted language learning component of the JEEP Program, specifically on JEEP Start 1 and the correlations of its variables with one another. This study intends to determine students' performance in JEEP Start 1, specifically on the pre-post placement test, courseware module level, study scores, mastery test, and using a control bar, all generated from the record's manager. Furthermore, this study determines the strength of relationships between pre-placement test and courseware level; mastery test, post-placement test, and study scores; study scores and the use of control bar buttons such as repeat button, voice record button, and playback button; and finally, study scores with post-placement test results and mastery tests. The result of this study justifies the 45 minutes of hands-on courseware activities for the JEEP Start 1 students. It provides evidence of the significance of JEEP Start 1 and 2 computer-assisted language learning in fast-tracking the teaching and learning of the English language.**2.**

MATERIALS AND METHODS

2.1 Research Design and Instruments

The study employed the descriptive correlation research design method to describe variables and establish relationships. The purposive sampling method involved all 56 students from the Bachelor of Science in Agriculture III taking up JEEP Start 1 at the University of Science and Technology of the Philippines during the first semester of SY 2019-20. The choice of the course was made in consideration of their would-be foreign exposure to agro-studies in Israel.

2.2 The Instruments

The research utilized the record manager at the JEEP Laboratory, which captured all the data of students' interactions in the class using the standardized, pre-tested, and pre-validated DynEd software materials uploaded into the system. It includes various courseware and modules of varying difficulty levels, ranging from 1 to 6, with the latter being the highest and most challenging.

The placement test provides a quick evaluation of a mix of language skills, emphasizing listening comprehension, vocabulary, grammar, and basic reading skills. (DynEd International, 2022). The DynEd Mastery Test is computer-assisted and designed to evaluate student progress and confirm mastery of the language skills developed in each course. Scores are rated as follows: 96–100, Excellent; 90–95, Good; 85–89, Satisfactory; 80–84, Unsatisfactory Pass; 0-79, F, Not Pass. [5]

2.3 Data Gathering Procedure

In this study, the students went through the same exposure that the JEEP dedicated teacher had, such as orientation on the use of multi-media and its applications, taking the DynEd placement test to determine courseware level, and understanding the functions of Path Manager, where when a unit gets completed, new units and mastery tests automatically open. Once the program is underway, the record manager and intelligent tutor monitor and evaluate the student's progress. Also, students were taught how to use the program to practice effectively, explicitly using the repeat button, the voice-record button, the playback button, and the text buttons appropriately. The use of each button was monitored by the Records Manager and reflected in the students' study scores, which could be seen in their student records through the Tutor button. All students taking the subject undergo this process in the computer-assisted language learning component of their Job Enabling English Proficiency (JEEP) class.

The researcher gathered the following data: the respondent's courseware, study scores, mastery test, and pre-post placement test. The researcher also investigated the frequency of students' interactions reflected in the record manager in terms of repeat button, microphone, and headset use to determine the study scores, mastery test, and post-placement tests of 56 students from the Bachelor of Science in Agriculture III taking up JEEP Start 1 at the University of Science and Technology of the Philippines during the first semester of SY 2019-20.

2.5 Statistical tools

The researcher used descriptive statistics to compute the frequency and percentages of the following data reflected on the Records' Manager such as time spent, weight study scores, courseware, module level, pre-post placement test, and mastery test and conducted a correlation analysis to find out existing relationships between and among variables.

According to Ratner [6] in his article The Correlation Coefficient: Its Values Range between Plus and Minus 1, or Do They? The correlation coefficient denoted by r= measures the strength of the straight line or linear relationship between two variables. O indicates no linear relationship. +1 indicates a perfect positive linear relationship; as one variable increases in its values, the other variable also increases in its values via an exact linear rule; -1 indicates a perfect negative linear relationship; as one variable increase in its values, the other variable decreases in its values via a clear linear rule; values between 0 and 0.3 (0 and -0.3) indicate a weak positive (negative) linear relationship; values between 0.3 and 0.7 (-0.3 and -0.7) indicate a moderate positive (negative) linear relationship; values between 0.7 and 1.0 (-0.7 and -1.0) indicate a strong positive (negative) linear relationship.

3. RESULTS AND DISCUSSIONS

The presentation, analysis of data, and discussion flow are according to the following variables: respondents' level of performance in computer-assisted language learning.

Table 1. Frequency and Percentage Distribution of Respondents in their Pre-Placement Test Result

Pre-Placement Test Result	Description	Frequency	Percentage
2.5 – 3.0	Excellent	3	5.36%
1.9- 2.4	Very Good	1	1.79%
1.3- 1.80	Good	1	1.79%
0.7- 1.20	Fair	30	53.57%

X= 0.80 Description: Fair Sd=0.56

Table 1 shows the percentage distribution of respondents' pre-placement test results in computer-assisted language learning through JEEP. According to the figure, 53.57 percent (n = 30) of the respondents received a pre-placement result of (0.7-1.2), 37.50 percent (n = 21) received a (0-0.6), and 5.36 percent (n = 3) received a (2.5-3+). Data shows that most of the respondent's test ratings range from poor to fair, while less than 10% got good to excellent ratings. This implies that most students taking the subject start with poor to fair language skills. This finding is attributed to the fact that most students enrolled in agriculture come from far-flung areas with very limited, if not no, internet connectivity; thus, students have limited exposure to using computers [7]. In his findings on the factors affecting computer-based exams, the last finding identified the difficulties faced by students due to a lack of computer skills. Thus, providing students with experience to enhance their computer skills is necessary.

Table 2 shows the frequency and percentage distribution of respondents' courseware's module level in JEEP's Computer-Assisted Language Learning. From the table, it can be

gleaned that 39.29 percent of the study participants acquired Module 1, followed by 33.93 percent (n = 19) for Module 2, and 19.64 percent (n = 11) for Module 3.

Table 2. Frequency and Percentage Distribution of Respondents' Courseware's Module Level in CALL Respondents' Module Levels

Module	Frequency	Percentage
1	22	39.29
2	19	33.93
3	11	19.64
4	1	1.79
5	2	3.57
6	1	1.79
Total	56	100

Mean = 2.02   Sd = 1.14

As shown, most respondents acquired only the basic levels 1 and 2 of DynEd modules, while only a very few acquired the higher levels of courseware modules. This implies that the majority of the students taking the JEEP class have only basic language skills and proficiency in the English language. This finding is supported by Ellsworth [8] in her study on the Teacher and Student Perception of DynEd Multi-Media Courseware: An Evaluation of CALL in an American Technical College, who found out that the DynEd test placed many of their upper-level students in the beginning modules of New Dynamic English, the same modules in which it had put most of the beginning and low intermediate students.

Table 3 shows that respondents' study score in computer-aided language learning is congruent with pre-placement findings. Students performed poorly in study scores, as indicated by a mean rating of -0.7. Zero is a fair rating, while a good rating ranges from 1-2; 3–4 is very good, and 5+ is excellent. The result implies that students do not use the repeat button, voice-record button, and playback button, which are necessary for raising their study scores. A fair rating indicates a slight increase in the study score.

Table 3. Percentage Distribution of Respondents' Study Score in CALL

Study Scores	Description	Frequency	Percentage
5.0- 6+	Excellent	5	8.93%
4.0-4.99	Very Good	3	5.36%
3.0- 3.99	Good	8	14.29%
0.1 -2.99	Fair	36	64.29%
0 -	Poor	4	7.14%

X = 2.45 Description: Fair Sd. = 1.05

On the other hand, the findings could still be attributed to inexperience with technology or DynEd, affecting their performance.

Table 4 shows the percentage distribution of Respondent's Mastery Test Results in Computer-Assisted Language Learning through JEEP. From the figure, it can be gleaned that 37.50 percent (n=21) got a very good rating, followed by 35.71 percent (n=20) as excellent, while 10.71 percent (n=6) described it as good.

Table 6. Percentage Distribution of Respondents' Use of Repeat Button Voice-Record Button, Playback button for language drills and comprehension

Table 4. Frequency and Percentage Distribution of Respondents' Mastery Test Result

Mastery Test Result	Description	Frequency	Percentage
96-100	Excellent	2	.4%
90-95.99	Very Good	19	34%
85-89.99	Good	17	30%
80-84.99	Fair	6	11%
0-79.99	Poor	12	21%
Total		56	100%

X = 84.90 Description: Fair Std. 1.207

This corroborated with the findings in a study entitled Computer Assisted Learning for Enhancing Mastery of Concepts in Science, wherein the study demonstrated that CAL enhanced active manipulation of content and promoted interaction with content, and gave reality to abstraction as evidenced by the higher study scores in SAT of 171 students using CAL compared to students taught in the conventional method.[9]. The result showed that respondents performed well in mastery tests during the CALL in JEEP, with an average of 84.90 percent. This implies that students were ready to take the mastery test. The result of the study showed a statistically significant difference at the level of $P<0.05$ between the reading comprehension scores of the two groups; therefore, using computer-assisted educational techniques can improve students' reading comprehension.

Table 5. Frequency Distribution of Respondents' Post-Placement Test Result

Post Placement	Description	Frequency	Percentage
2.5 -3	Excellent	8	14.29%
1.9 -2.4	VG	7	12.50%
1.3 -1.8	Good	7	12.50%
0.7-1.2	Fair	27	48.21%
0.0- 0.6	Poor	7	12.50%
Description	Good	56	100.00%

The result shows the percentage distribution of Respondents' Post- Placement Test Results in Computer-Assisted Language Learning through JEEP. From the figure, it can be gleaned that 48.21 percent (n=27) of the respondents got a post-placement result of Fair (0.7-1.2), followed by 14.29 percent (n=8) Excellent (2.5-3.0) and 12.50% (n=21) for each of the Good to Very Good and Poor. A noticeable increase is evident from a mean rating in pre-placement of 0.80 to post placement test mean rating of 1.32. This finding implies that most students were ready to take Part 2 of the Placement Test. An increment of 0.51 is evidence to show that there was a considerable improvement in terms of performance in the JEEP Start.

Table 6

Description	Repeat Button Use		Voice-Record Button		Playback Button	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**
Excellent	1	1.79%	0	0%	0	0%
Very Good	2	3.56%	3	5.36%	1	1.80%
Good	5	8.93%	6	10.71%	5	8.90%
Fair	12	21.43%	16	28.57%	49	87.50%
Poor	36	64.29%	31	55.36%	1	1.80%
total	56	100.00%	56	100.00%	56	100.00%

Results in table 6 show that most respondents use the repeat button and voice record poorly, as indicated by 64.29 percent and 55.36 percent, respectively, and fair use of the playback button, as indicated by 87.50 percent. This implies that students are not very knowledgeable about using the control bar.

Van [10], in his study on the effect of computer-assisted language learning (CALL) on performance in the Test of English for International Communication (TOEIC) Listening Module, The results showed that there was a difference in the performance on TOEIC listening test scores between two groups. The students in the treatment group used listening strategies more effectively than those in the control group. Moreover, CALL instruction and teaching methods significantly increased the students' TOEIC listening scores.

This finding is similar to a study on the improvement of reading comprehension through computer-assisted language learning in Iranian intermediate EFL students [8]; the result of the study showed that there was a statistically significant difference at the level of P<0.05 between reading comprehension scores of the two groups; therefore, it was concluded that the use of computer-assisted educational techniques could improve students' reading comprehension.

Correlation Analysis

Table 7. Correlation Analysis between respondents' study scores and use of the Control Bar (repeat button, microphone, and headset)

Variables	Correlation Coefficient (r)	Sig. (2-tailed)
Study Scores	--0.90	.511
Repeat Button Use	.563**	.000
Voice Record Button (mic)	.404**	.002
Playback button (head)	.396	.001

A correlation of +0.563** between respondents' study scores and using the repeat button in table 7 shows a strong relationship; In contrast, a correlation of .404** and r .396 shows a moderate relationship between study score and playback button use. Hence, a null hypothesis that there is no significant relationship between study scores and the use of the repeat button, voice record button (mic), and playback button (head) is rejected. The result implies that the more frequently the student uses the repeat button, microphone, and head, the study score increases.

Table 8. Correlation Analysis between respondents' Study Scores and Mastery Test

Variables	Correlation Coefficient (r)	Sig. (2-tailed)
Study Scores	.238	.072
Mastery Test	.238	.072

Table above shows a non-significant positive correlation existed between study scores and mastery test as indicated by r=0.238, p=0.072), meaning mastery test results increase regardless of study score.

Table 9. Correlation Analysis between respondents' Pre-Post Placement Test

Variables	Correlation Coefficient (r)	Sig. (2-tailed)
Pre-Placement Test	.648**	.000
Post-Placement Test	1	

Table 9 reveals Pre-placement and Post-placement test results are significantly correlated, as indicated by r=0.65 (p<0.01). Additionally, the test result increment is positively correlated with the post-placement test (r=.49, p<0.01); the Null hypothesis is rejected.

Table 10. Correlation Analysis between Courseware Module Level and Mastery Test

Variables	Correlation Coefficient (r)	Sig. (2-tailed)
Module Level	.359**	.007
Mastery Test	..359**	.007

Table 10 revealed a positive correlation between mastery test with courseware module level (r=0.36, p<0.01)). Thus, the null hypothesis is rejected.

Table 11. Correlation Analysis between Module Level and Post-Placement Test

Variables	Correlation Coefficient (r)	Sig. (2-tailed)
Module Level	.446**	.001
Post-Placement Test	.446**	.001

Table 11 revealed that a positive correlation exists between the courseware module level (r=0.36, p<0.01)) and the post-placement test with module level (r=0.45, p<0.01), which implies that as the courseware module level increases, post-placement test result increases.

Considering all positive correlations between variables, the null hypotheses are all rejected. An increase in one variable leads to a rise in the other.

4. CONCLUSION

In this study, it was found that the Computer-Assisted Language Learning (CALL) component of the Job Enabling English Proficiency (JEEP) subject is a beneficial tool in enhancing the English language skills of learners. Students'

post-placement test results showed an increment of 0.51, from a pre-placement mean result of 0.80 to a mean rating of 1.32. This implies that students' performance in JEEP Start 1, as revealed by its post-placement result, had increased at the end of the semester. Meanwhile, students' mastery test in JEEP CALL was 84.90 percent, implying that students had studied 70 percent of the lesson in their respective courseware and were ready to take the mastery test. However, this study found that students still need more knowledge and skills in using repeat buttons, voice recording, and playback buttons, as indicated by its fair rating. The fair result implied that students did not often use the repeat button, voice record, and playback button.

A correlation of +0.563** between respondents' study scores and using the repeat button shows a strong relationship. In contrast, a correlation of .404** and r .396 indicates a moderate relationship between study score and playback button use. Hence, a null hypothesis that there is no significant relationship between study scores and the use of the repeat button, voice record button (mic), and playback button (head) is rejected. The result implies that the more frequently the student uses the repeat button, microphone, and head, the study score increases. Meanwhile, pre- and post-placement test results are significantly correlated, as indicated by r=0.65 (p<0.01). Thus, its null hypothesis is rejected. There is also a positive correlation between mastery test with courseware module level (r=0.36, p<0.01)) which implies that if a student's mastery test increases, the more and higher and more challenging the courseware levels become. Thus, a null hypothesis, which states no positive correlation between mastery test and courseware module level, is rejected. Overall finding corroborates the findings in the study entitled Computer-assisted Collaborative Learning (CCL) [11], which concludes that CALL is a good teaching technique to enhance students' learning and intellectual performance consistency; it likewise supports the findings [12]. On Proficiency in language program for maritime students in Misamis University, Philippines which highlights results of the appraisal which are critical in developing strategies to improve the program. Moreover, DynEd CALL can significantly promote students' English learning proficiency, especially in listening and speaking skills [13]. This finding opposes the study "Does DYNED affect students' attitudes and Language Skills in EFL?" [14]

From these findings, the researcher generated the following recommendations:

1. Job Enabling English Program Instructors may facilitate close monitoring of students' use of DynED courseware's repeat button, voice-record button, and playback button use, which eventually helps raise study scores and likewise raise their courseware's module levels, mastery test, and post-placement test results.
2. JEEP Coordinator/ Administration may propose more seminars and training on the Brain-Based Approach to facilitate better Computer-Assisted Language Learning Classes for teachers' handling the subject. A reward system for best-performing students is initiated.
3. Students taking the subject may constantly be reminded to click options every class to check improvement in study scores, what the tutors recommend, and percentage completion of 80% to pass the mastery test and eventually achieve a higher increment in the post-placement test.
4. Continuing studies in future research relative to CALL may be conducted for a more encompassing analysis.

5. ACKNOWLEDGMENT

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