CORRELATIVE ANALYSIS OF TOEFL iBT SCORES OF LISTENING SKILL VERSUS SCORES OF BUSINESS ENGLISH SPEAKING SKILL AMONG BINUS UNIVERSITY SOPHOMORES

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ABSTRACT

Article found out whether BINUS university sophomore's TOEFL iBT scores of Listening skill are correlated with those of speaking skill. The research project was expected to result in the best teaching technique of delivering conversational tasks at BINUS University by using alternative approaches of integrated, isolated, or mixed skills. The research project applied the descriptive approach of quantitative method, and thus depends on numerical data. The research project examined the set of data under two skills of the same class groups, which were to compare the listening scores with the speaking ones. Then, the degree of correlation of the two skills was tested so as to find its significance. Interpretation and explanation of data was made based on the statistical results by using correlation research analysis. Based on the statistical results, the listening scores significantly correlated with those of the speaking skill, and there is a moderately linear relationship between these paired scores.

Keywords: score correlation, speaking, listening, sophomore students, TOEFL

ABSTRAK

Artikel menjelaskan korelasi nilai TOEFL iBT Listening mahasiswa BINUS University yang sedang belajar di tahun kedua dengan nilai Business English Speaking mereka. Hasil penelitian diharapkan dapat menghasilkan teknik pengajaran yang lebih sesuai dengan tuntutan percakapan yang diharapkan oleh BINUS University, antara lain, dengan menggunakan pilihan pendekatan integrated, independen, atau campuran. Penelitian menggunakan metode pendekatan kuantitatif dengan memasukkan data berupa angka. Penelitian mengkaji kumpulan data dalam dua bentuk skill, yang semuanya ditarik dari satu kelompok subjek yang sama, yaitu dengan membandingkan nilai Listening dengan nilai Speaking mereka. Kemudian, tingkat korelasi dari dua skill ini diuji untuk mengetahui signifikansinya. Interpretasi dan penjabaran data dibuat berdasarkan penghitungan statistika dengan menggunakan correlation research analysis. Berdasarkan hasil peneltian, skor Listening berkorelasi secara signifikan dengan skor Speaking, dan terdapat hubungan yang cukup linear antara dua pasang skor ini.

Kata kunci: korelasi nilai, berbicara, menyimak, mahasiswa tingkat dua, TOEFL

INTRODUCTION

When teachers deliver courses for international language test preparation, like TOEFL, IELTS, or TOEIC, they tend to teach the four skills – Reading, Listening, Speaking and Listening – separately. The previous version of TOEFL, called TOEFL PBT (Paper-based Test), evaluates language skills in three separate sections, which are Listening Comprehension, Structure/Written Expression, and Reading Comprehension. Though it does not contain the speaking section, many English teachers assume that the higher the TOEFL PBT score is, the more likely the test taker is able to communicate English in academic contexts, though it is not always absolute. Based on this framework of assumption, many education institutions in Indonesia have set the minimum TOEFL PBT score of 500 as one of the requirements for postgraduate study entry level, regardless of the students' actual communication performances. Thus, we can see here that in many TOEFL PBT preparation courses and tests, there has not been any emphasis on the value of highlighting the relationships between these skills, either in the teaching and learning process, or in the test format itself.

BINUS University has the English course program that includes TOEFL iBT elements in its curriculum, which are Reading and Listening. On the other hand, the Speaking and Writing are more catered for general or business themes. The curriculum has been designed in such a way to serve the dual needs of both academic and business purposes. Based on my teaching experiences of the courses at BINUS University, I have observed that if my students scored higher on the TOEFL iBT listening, they tended to score higher on their speaking performance.

From the circumstances and cases explained, this research would assume that it seems there is a hidden connection between the listening and speaking. Hence, this research project tries to consolidate the general connection, if any, between this pair of skills, so as to find the best format of teaching to deliver these two skills in the classroom with the expectation that it allows students achieve higher and better on their English performance, both in academic and business environment.

Therefore, the problem formulation that the research project aims to address is to find out: whether there is a correlation between TOEFL iBT Listening scores and Business English Speaking scores of BINUS University sophomore of academic year 2012/2013, and the strength of the relationship, if any, between TOEFL iBT Listening scores and Business English Speaking scores of BINUS University sophomore of academic year 2012/2013

The significance of the research project is that it can generate the most suitable format of teaching and learning model in BINUS University to best deliver the two language skills, listening and speaking, in their proportion and functions under academic and business themes to finally meet the final expectation of academic and business purposes in the final year of their study.

Hinkel (2006:113) argues: "in meaningful communication, people employ incremental language skills not in isolation, but in tandem". According to Harmer (2007:265): "when we have a conversation, we need to listen as well as speak in order to maintain the interaction with the interlocutor." Thus, in the actual use of daily conversation in English, we often depend on these two skills together to maintain the interaction. There might be a relationship to some extent between listening and speaking activities, in which the two skills correlate and interact to each other to play their roles and meet their purposes for the conversation process.

Hence, language skills are often used in multi-dimensions in the communication process in the real world. It would be dangerous to look at each skill in isolation during the teaching and learning process, especially for international test preparation, where skills are often tested, scored, and described their competence individually. How receptive skills like, Listening and Reading, connected with productive skills, like Speaking and Writing needs to be examined.

Another perspective to explain the connection between listening and speaking is given by Celce-Murcia and Olshtain (2000:104), as follows.
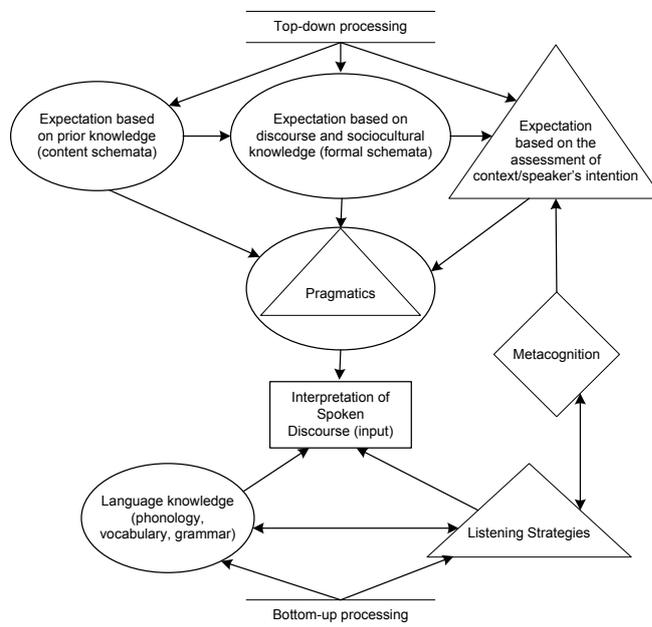
Figure1 Celce-Murcia and Olshtain's Connection
between Listening and Speaking
(p.104)

Thus, the receptive skills activities as well as the productive skills activities each as the connections between top-down and bottom-up processing could be seen. Here, the global understanding of the topic in the written and spoken discourses and understanding of the details of the discourses help the users perform the language actively, in writing and speaking activities.

There is also experimental evidence that listening practice is more important for oral skills development than speaking practice. Anderson and Lynch (1988:16) show that students who have had a substantial amount of task-based listening practice are better able to perform a similar oral tasks in the future, compared to other students who had been given only speaking practice. In this case, teaching listening only is more effective than teaching speaking only. Celce-Murcia and Olshtain (2000:108)

aptly assume that "giving practice with both skills—first listening and then speaking—would be the best possible preparation, but if the teacher doesn't have time to do both, then listening practice … should take precedence." Burns (1998) specifically mentions "sets of listening materials for developing language awareness" (p. 111). She also recommends that "learners can be engaged in listening prediction activities that require them to anticipate discourse structures, vocabulary, and functional forms and to draw on their knowledge of target socio-cultural practices in preparation for the production of spoken texts" (p. 113). Thus, we can see here how she tries to put the link between listening and speaking.

METHOD

Based on the nature of this research methodology, this research project is more of the positivist/empiricist epistemology and an attempt at gathering "objective", verifiable data in numerical form. This quantitative strand is more concerned with "generalization, prediction and control" (Usher, 1996). Based on the brief overview presented, research used descriptive statistics in which the use of statistical procedures to summarize, tabulate, depict and describe the properties of sets of data (including quantitative data) (See Wiersma, 2000, chapter 13). Research applied the approach of quantitative data gathering and analysis. By using a quantitative methodology in the project, research focuses on more context-free generalizations of the observed social phenomenon by examining the relationship of the variables, which are the TOEFL iBT Listening scores and the Business English Speaking scores. Statistical results are represented with numbers. The correlation research was used to indicate the relationship between paired scores, to know how strong the relationship is, and whether it of positive and negative. To do this, a correlation coefficient that represents the correlation was calculated.

The research project divided the raw scores into two pair domains, which are the paired TOEFL iBT Listening scores and Business English Speaking scores. The pair consists of two scores for the same individual. The scores are derived partly from the Mid Test and Final Test results for Listening, and from the results of Daily Assessment for Speaking. The Listening test is based on TOEFL iBT format with the score range from 0 to 30 respectively. The test is computer-based and its scores are calculated and generated by the computer. The computer-based scores are provided by BINUS University SLC (Software Laboratory Center) unit and sent to our emails by the end of each test. The Speaking tasks are based on general/business topics with the score range from 0 to 3.0 and converted to 0 to 23. The conversion of the Speaking scores is meant to equal with the TOEFL iBT score calculation. The Speaking tasks are scored by the teachers based on the standard score rubric and given to writer every quarter of the running semester.

Target population is all BINUS University sophomore students who take the English in Focus subject in Academic Year 2012/2013. Research took the sample of three class groups, each with the range of students from 50 to 70 participants. These students are chosen as the participants in the research project due to some reasons. First, students of second year study are expected to have developed some basic skills of TOEFL iBT Listening and Business English Speaking that they had experienced before in English Entrant subject. Secondly, the sophomores are expected to reach the higher target score than the freshmen, which is TOEFL PBT 500 as the minimum pass score for the next level. This would contribute some degree of motivation for these students to perform higher and better in their study experiences.

Since there are only some class groups to be sampled from a number of other English in Focus class groups running in Academic Year 2012/2013, research used the approach of simple random sampling, where "all members of the population have an equal and independent chance of being included in the random sample." (Ary, Jacobs, Razavieh, & Sorensen, 2006)

The mid test consists of two parts. The first part is the Listening tests at laboratories based on TOEFL iBT format on the computers. The computer-based test material is taken from BINUS University NG-TOEFL version 3. The second part is the Speaking tasks held by the teacher from the first meeting to around the seventh or eighth. The TOEFL iBT Listening scores are compared with the Business English Speaking scores.

The quantitative calculation is used in this research by using the correlation statistical analysis to test the hypotheses with .05 level of confidence. We use the table that lists critical values of r for different numbers of degrees of freedom (df). By comparing the obtained r with the critical values of r listed in the table, we can determine the statistical significance of a product moment correlation. If the obtained correlation exceeds the critical value listed in the table, we can report that the correlation is statistically significant. The null hypothesis would be rejected, and we would tentatively conclude that the two variables are related in the population.

Then, the writer tests the hypotheses as follows: (1) Null Hypothesis: the TOEFL iBT Listening scores are not significantly related to the General Speaking scores among BINUS University sophomores in Mid Test; (2) Alternate Hypothesis: the TOEFL iBT Listening scores are significantly related to the General Speaking scores among BINUS University sophomores in Mid Test.

In the set of scores, the independent variable is the TOEFL iBT Listening scores, and the dependent variable is the Business English Speaking scores. The correlation statistical analysis was used due to several reasons. First, we would "determine the extent of any relationship between these variables" (Ary, Jacobs, Razavieh, & Sorensen, 2006). In this case, is there a relationship between Listening and Speaking? Secondly, in this research, we would measure the reliability (consistency) of the Mid-term Test through correlating Listening and Speaking scores. Thirdly, we would try to establish prediction on each of the two paired variables, if proven correlated. For example, we could use the Listening scores to predict the Speaking scores. The correlation statistical analysis best applies in prediction studies.

The correlation coefficient derived from the calculation is to indicate both the direction and the strength of the relationship between two variables in the pair. The

Table 1 The Correlation Coefficient of Listening and Speaking Scores

-1.00	Perfect negative correlation	If found, it would mean that the two sets of scores, Listening and Speaking, have the same rank order, only reversed.
-0.80	Strong negative correlation	High scores on one measure (Listening) usually mean low scores on the other (Speaking)
-0.30	Weak negative correlation	A slight tendency for those scoring highest on one measure (Listening) to score lowest on the other (Speaking)
0.00	No relationship at all	Those who score high/low on one measure (Listening) are NO more likely to score higher/lower on the other (Speaking).
+0.30	Weak positive correlation	A slight tendency for those scoring highest on one measure (Listening) to score highest on the other (Speaking).
+0.80	Strong positive correlation	High scores on one measure (Listening) usually mean high scores on the other (Speaking).
+1.00	Perfect positive correlation	If found, the two sets of scores (Listening and Speaking) would have identical rank orderings from lowest to highest.

coefficient can take any value from -1 to +1, with the following interpretations as shown in Table 1.

The best practical way to illustrate and understand the relationship is by examining a scatterplot of the data. So, in this research, a scatterplot diagram is made to know whether it is of: (1) a positive correlation (as independent variable goes up, dependent variable also goes up), or; (2) a negative correlation (as independent variable goes up, dependent variable goes down). A scatterplot is also provided to know the strength of the relationship between variables whether it is of: (1) strong linear relationship, when the dots in the scatterplot form a narrow band, and scatter near the straight line through the band; (2) weak linear relationship, when the dots in the scatterplot scatter widely from the line; (3) curvilinear relationship, when a curved line is needed to express the relationship.

All of the findings of each of the paired variables are described and interpreted so as to find the third variable, if any, as the cause of the relationship. The final conclusion and suggestion is given in the end of the research.

RESULTS AND DISCUSSION

The data presentation of the Listening and Speaking scores of the Binus University sophomores taking English in Focus subject during Mid Test of Even Semester in Academic Year 2012/2013 is provided in Table 2 below. In Table 2, column 1 shows the class codes, column 2 lists the students' numbers, column 3 shows each student's listening scaled score on TOEFL iBT (X), column 4 shows these scaled scores squared (X2), column 5 shows each student's speaking scaled score on General English (Y), column 6 shows these scaled scores squared (Y2), and column 7 shows the product of each student's X scaled score multiplied by his/her Y scaled core (XY).

Table 2 The Listening and Speaking Scores of the Binus University Sophomores

Class	Student No.	Listening Scores		Speaking Scores		
		X	X2	Y	Y2	XY
02PXJ	1601219113	9	81	15	225	135
	1601220033	15	225	17	289	255
	1601221023	22	484	19	361	418
	1601222581	19	361	19	361	361
	1601223666	12	144	15	225	180
	1601223893	6	36	14	196	84
	1601225040	7	49	14	196	98
	1601227052	23	529	19	361	437
	1601228061	15	225	17	289	255
	1601228332	4	16	15	225	60
	1601231781	6	36	15	225	90
	1601233276	20	400	19	361	380
	1601233862	11	121	15	225	165
	1601234000	17	289	17	289	289
	1601234291	10	100	15	225	150
	1601235565	17	289	17	289	289
	1601235981	13	169	17	289	221
	1601236100	18	324	19	361	342

Table 2 The Listening and Speaking Scores of the Binus University Sophomores
(continued)

Class	Student No.	Listening Scores		Speaking Scores		
		X	X2	Y	Y2	XY
	1601237444	15	225	18	324	270
	1601239651	12	144	15	225	180
	1601242223	13	169	17	289	221
	1601242671	15	225	19	361	285
	1601252224	12	144	15	225	180
	1601252363	14	196	15	225	210
	1601258455	7	49	15	225	105
	1601263745	11	121	15	225	165
	1601266886	18	324	19	361	342
	1601272825	12	144	17	289	204
	1601273696	3	9	13	169	39
	1601275360	8	64	13	169	104
	1601276930	16	256	19	361	304
	1601278955	15	225	18	324	270
	1601283873	17	289	19	361	323
	1601284876	7	49	17	289	119
02 PGT	1601232651	24	576	19	361	456
	1601232701	20	400	19	361	380
	1601233061	14	196	17	289	238
	1601234732	13	169	17	289	221
	1601234814	18	324	19	361	342
	1601235104	15	225	17	289	255
	1601235943	20	400	19	361	380
	1601237570	15	225	20	400	300
	1601237633	13	169	15	225	195
	1601239916	19	361	19	361	361
	1601239986	12	144	17	289	204
	1601240722	8	64	15	225	120
	1601242822	12	144	15	225	180
	1601244121	11	121	15	225	165
	1601245105	18	324	17	289	306
	1601245225	13	169	15	225	195
	1601247685	15	225	17	289	255
	1601248284	9	81	15	225	135
	1601251480	21	441	19	361	399
	1601252621	22	484	17	289	374
	1601252634	14	196	18	324	252
	1601253385	13	169	15	225	195
	1601254053	20	400	17	289	340
	1601254532	11	121	17	289	187
	1601254564	12	144	17	289	204
	1601257351	16	256	15	225	240
	1601258240	23	529	18	324	414
	1601258266	28	784	19	361	532
	1601258884	11	121	15	225	165
	1601260176	8	64	15	225	120
	1601264086	10	100	15	225	150
	1601264722	9	81	15	225	135
	1601266910	6	36	15	225	90
	1601266936	14	196	15	225	210
	1601267365	9	81	17	289	153

Table 2 The Listening and Speaking Scores of the Binus University Sophomores
(continued)

Class	Student No.	Listening Scores		Speaking Scores		
		X	X2	Y	Y2	XY
	1601270315	17	289	17	289	289
	1601272314	12	144	15	225	180
	1601272485	9	81	17	289	153
	1601272560	14	196	17	289	238
	1601273235	10	100	15	225	150
	1601273992	16	256	17	289	272
	1601274635	17	289	19	361	323
	1601278394	9	81	15	225	135
	1601283652	13	169	15	225	195
	1601284485	15	225	15	225	225
	1601285052	10	100	18	324	180
	1601286843	8	64	15	225	120
02PEF	1601229455	7	49	15	225	105
	1601230122	13	169	15	225	195
	1601231604	14	196	15	225	210
	1601232696	21	441	17	289	357
	1601239065	24	576	20	400	480
	1601239992	21	441	19	361	399
	1601241624	9	81	17	289	153
	1601243213	11	121	15	225	165
	1601244834	19	361	19	361	361
	1601244853	6	36	15	225	90
	1601246240	9	81	17	289	153
	1601248725	13	169	17	289	221
	1601252041	10	100	17	289	170
	1601252086	13	169	19	361	247
	1601253460	12	144	15	225	180
	1601254690	13	169	17	289	221
	1601254854	17	289	17	289	289
	1601254923	6	36	13	169	78
	1601256052	15	225	15	225	225
	1601256203	11	121	15	225	165
	1601256613	13	169	15	225	195
	1601260144	12	144	15	225	180
	1601260850	14	196	17	289	238
	1601263543	11	121	15	225	165
	1601264685	11	121	15	225	165
	1601265561	21	441	19	361	399
	1601265832	19	361	19	361	361
	1601265845	11	121	15	225	165
	1601266343	18	324	17	289	306
	1601266362	14	196	15	225	210
	1601267094	16	256	17	289	272
	1601267503	17	289	19	361	323
	1601270183	13	169	15	225	195
	1601271021	15	225	17	289	255
	1601273254	9	81	15	225	135
	1601275234	22	484	19	361	418
	1601275373	11	121	15	225	165
	1601276615	13	169	15	225	195
	TOTAL	$\sum X=1629$	$\sum X^2=24987$	$\sum Y=1966$	$\sum Y^2=32834$	$\sum XY=27644$

Table 3 indicates that column 1 shows the class codes, column 2 lists the students' numbers, column 3 shows each student's listening scaled score on TOEFL iBT (X), column 4 shows the deviation of each score from the mean (x), column 5 shows the deviation of each score from the mean squared (x2), column 6 shows the Z scores of the TOEFL iBT Listening test (Zx), column 7 shows each student's speaking scaled score on Business English task (Y), column 8 shows the deviation of each score from the mean (y), column 9 shows the deviation of each score from the mean squared (y2), and column 10 shows the Z scores of the Business English Speaking task (Zy).

Table 3 Variance of TOEFL iBT ListeninVg Scores and Business English Speaking Scores

Class	Student No.	Listening Scores				Speaking Scores			
		X	x	x^2	Z_x	Y	y	y^2	Z_y
02PXJ	1601219113	9	-4.68908	21.98747	-0.9867	15	-1.52101	2.313471	-0.88225
	1601220033	15	1.31092	1.718511	0.275852	17	0.47899	0.229431	0.277833
	1601221023	22	8.31092	69.07139	1.748834	19	2.47899	6.145391	1.437912
	1601222581	19	5.31092	28.20587	1.117556	19	2.47899	6.145391	1.437912
	1601223666	12	-1.68908	2.852991	-0.35543	15	-1.52101	2.313471	-0.88225
	1601223893	6	-7.68908	59.12195	-1.61798	14	-2.52101	6.355491	-1.46229
	1601225040	7	-6.68908	44.74379	-1.40756	14	-2.52101	6.355491	-1.46229
	1601227052	23	9.31092	86.69323	1.95926	19	2.47899	6.145391	1.437912
	1601228061	15	1.31092	1.718511	0.275852	17	0.47899	0.229431	0.277833
	1601228332	4	-9.68908	93.87827	-2.03884	15	-1.52101	2.313471	-0.88225
	1601231781	6	-7.68908	59.12195	-1.61798	15	-1.52101	2.313471	-0.88225
	1601233276	20	6.31092	39.82771	1.327982	19	2.47899	6.145391	1.437912
	1601233862	11	-2.68908	7.231151	-0.56585	15	-1.52101	2.313471	-0.88225
	1601234000	17	3.31092	10.96219	0.696704	17	0.47899	0.229431	0.277833
	1601234291	10	-3.68908	13.60931	-0.77628	15	-1.52101	2.313471	-0.88225
	1601235565	17	3.31092	10.96219	0.696704	17	0.47899	0.229431	0.277833
	1601235981	13	-0.68908	0.474831	-0.145	17	0.47899	0.229431	0.277833
	1601236100	18	4.31092	18.58403	0.90713	19	2.47899	6.145391	1.437912
	1601237444	15	1.31092	1.718511	0.275852	18	1.47899	2.187411	0.857872
	1601239651	12	-1.68908	2.852991	-0.35543	15	-1.52101	2.313471	-0.88225
	1601242223	13	-0.68908	0.474831	-0.145	17	0.47899	0.229431	0.277833
	1601242671	15	1.31092	1.718511	0.275852	19	2.47899	6.145391	1.437912
	1601252224	12	-1.68908	2.852991	-0.35543	15	-1.52101	2.313471	-0.88225
	1601252363	14	0.31092	0.096671	0.065426	15	-1.52101	2.313471	-0.88225
	1601258455	7	-6.68908	44.74379	-1.40756	15	-1.52101	2.313471	-0.88225
	1601263745	11	-2.68908	7.231151	-0.56585	15	-1.52101	2.313471	-0.88225
	1601266886	18	4.31092	18.58403	0.90713	19	2.47899	6.145391	1.437912
	1601272825	12	-1.68908	2.852991	-0.35543	17	0.47899	0.229431	0.277833
	1601273696	3	-10.6891	114.2564	-2.24926	13	-3.52101	12.39751	-2.04232
	1601275360	8	-5.68908	32.36563	-1.19713	13	-3.52101	12.39751	-2.04232
	1601276930	16	2.31092	5.340351	0.486278	19	2.47899	6.145391	1.437912
	1601278955	15	1.31092	1.718511	0.275852	18	1.47899	2.187411	0.857872
	1601283873	17	3.31092	10.96219	0.696704	19	2.47899	6.145391	1.437912
	1601284876	7	-6.68908	44.74379	-1.40756	17	0.47899	0.229431	0.277833
02 PGT	1601232651	24	10.31092	106.3151	2.169686	19	2.47899	6.145391	1.437912
	1601232701	20	6.31092	39.82771	1.327982	19	2.47899	6.145391	1.437912
	1601233061	14	0.31092	0.096671	0.065426	17	0.47899	0.229431	0.277833
	1601234732	13	-0.68908	0.474831	-0.145	17	0.47899	0.229431	0.277833
	1601234814	18	4.31092	18.58403	0.90713	19	2.47899	6.145391	1.437912
	1601235104	15	1.31092	1.718511	0.275852	17	0.47899	0.229431	0.277833
	1601235943	20	6.31092	39.82771	1.327982	19	2.47899	6.145391	1.437912
	1601237570	15	1.31092	1.718511	0.275852	20	3.47899	12.10337	2.017951
	1601237633	13	-0.68908	0.474831	-0.145	15	-1.52101	2.313471	-0.88225
	1601239916	19	5.31092	28.20587	1.117556	19	2.47899	6.145391	1.437912
	1601239986	12	-1.68908	2.852991	-0.35543	17	0.47899	0.229431	0.277833

Table 3 Variance of TOEFL iBT ListeninVg Scores and Business English Speaking Scores
(continued)

Class	Student No.	Listening Scores				Speaking Scores			
		X	x	x^2	Z_x	Y	y	y^2	Z_y
02PXJ	1601240722	8	-5.68908	32.36563	-1.19713	15	-1.52101	2.313471	-0.88225
	1601242822	12	-1.68908	2.852991	-0.35543	15	-1.52101	2.313471	-0.88225
	1601244121	11	-2.68908	7.231151	-0.56585	15	-1.52101	2.313471	-0.88225
	1601245105	18	4.31092	18.58403	0.90713	17	0.47899	0.229431	0.277833
	1601245225	13	-0.68908	0.474831	-0.145	15	-1.52101	2.313471	-0.88225
	1601247685	15	1.31092	1.718511	0.275852	17	0.47899	0.229431	0.277833
	1601248284	9	-4.68908	21.98747	-0.9867	15	-1.52101	2.313471	-0.88225
	1601251480	21	7.31092	53.44955	1.538408	19	2.47899	6.145391	1.437912
	1601252621	22	8.31092	69.07139	1.748834	17	0.47899	0.229431	0.277833
	1601252634	14	0.31092	0.096671	0.065426	18	1.47899	2.187411	0.857872
	1601253385	13	-0.68908	0.474831	-0.145	15	-1.52101	2.313471	-0.88225
	1601254053	20	6.31092	39.82771	1.327982	17	0.47899	0.229431	0.277833
	1601254532	11	-2.68908	7.231151	-0.56585	17	0.47899	0.229431	0.277833
	1601254564	12	-1.68908	2.852991	-0.35543	17	0.47899	0.229431	0.277833
	1601257351	16	2.31092	5.340351	0.486278	15	-1.52101	2.313471	-0.88225
	1601258240	23	9.31092	86.69323	1.95926	18	1.47899	2.187411	0.857872
	1601258266	28	14.31092	204.8024	3.011391	19	2.47899	6.145391	1.437912
	1601258884	11	-2.68908	7.231151	-0.56585	15	-1.52101	2.313471	-0.88225
	1601260176	8	-5.68908	32.36563	-1.19713	15	-1.52101	2.313471	-0.88225
	1601264086	10	-3.68908	13.60931	-0.77628	15	-1.52101	2.313471	-0.88225
	1601264722	9	-4.68908	21.98747	-0.9867	15	-1.52101	2.313471	-0.88225
	1601266910	6	-7.68908	59.12195	-1.61798	15	-1.52101	2.313471	-0.88225
	1601266936	14	0.31092	0.096671	0.065426	15	-1.52101	2.313471	-0.88225
	1601267365	9	-4.68908	21.98747	-0.9867	17	0.47899	0.229431	0.277833
	1601270315	17	3.31092	10.96219	0.696704	17	0.47899	0.229431	0.277833
	1601272314	12	-1.68908	2.852991	-0.35543	15	-1.52101	2.313471	-0.88225
	1601272485	9	-4.68908	21.98747	-0.9867	17	0.47899	0.229431	0.277833
	1601272560	14	0.31092	0.096671	0.065426	17	0.47899	0.229431	0.277833
	1601273235	10	-3.68908	13.60931	-0.77628	15	-1.52101	2.313471	-0.88225
	1601273992	16	2.31092	5.340351	0.486278	17	0.47899	0.229431	0.277833
	1601274635	17	3.31092	10.96219	0.696704	19	2.47899	6.145391	1.437912
	1601278394	9	-4.68908	21.98747	-0.9867	15	-1.52101	2.313471	-0.88225
	1601283652	13	-0.68908	0.474831	-0.145	15	-1.52101	2.313471	-0.88225
	1601284485	15	1.31092	1.718511	0.275852	15	-1.52101	2.313471	-0.88225
	1601285052	10	-3.68908	13.60931	-0.77628	18	1.47899	2.187411	0.857872
	1601286843	8	-5.68908	32.36563	-1.19713	15	-1.52101	2.313471	-0.88225
02 PEF	1601229455	7	-6.68908	44.74379	-1.40756	15	-1.52101	2.313471	-0.88225
	1601230122	13	-0.68908	0.474831	-0.145	15	-1.52101	2.313471	-0.88225
	1601252086	13	-0.68908	0.474831	-0.145	19	2.47899	6.145391	1.437912
	1601253460	12	-1.68908	2.852991	-0.35543	15	-1.52101	2.313471	-0.88225
	1601254690	13	-0.68908	0.474831	-0.145	17	0.47899	0.229431	0.277833
	1601254854	17	3.31092	10.96219	0.696704	17	0.47899	0.229431	0.277833
	1601254923	6	-7.68908	59.12195	-1.61798	13	-3.52101	12.39751	-2.04232
	1601256052	15	1.31092	1.718511	0.275852	15	-1.52101	2.313471	-0.88225
	1601256203	11	-2.68908	7.231151	-0.56585	15	-1.52101	2.313471	-0.88225
	1601256613	13	-0.68908	0.474831	-0.145	15	-1.52101	2.313471	-0.88225
	1601260144	12	-1.68908	2.852991	-0.35543	15	-1.52101	2.313471	-0.88225
	1601260850	14	0.31092	0.096671	0.065426	17	0.47899	0.229431	0.277833
	1601263543	11	-2.68908	7.231151	-0.56585	15	-1.52101	2.313471	-0.88225
	1601264685	11	-2.68908	7.231151	-0.56585	15	-1.52101	2.313471	-0.88225
	1601265561	21	7.31092	53.44955	1.538408	19	2.47899	6.145391	1.437912
	1601265832	19	5.31092	28.20587	1.117556	19	2.47899	6.145391	1.437912

Table 3 Variance of TOEFL iBT ListeninVg Scores and Business English Speaking Scores
(continued)

Class	Student No.	Listening Scores				Speaking Scores			
		X	x	x²	Z_x	Y	y	y²	Z_y
02PXJ	1601265845	11	-2.68908	7.231151	-0.56585	15	-1.52101	2.313471	-0.88225
	1601266343	18	4.31092	18.58403	0.90713	17	0.47899	0.229431	0.277833
	1601266362	14	0.31092	0.096671	0.065426	15	-1.52101	2.313471	-0.88225
	1601267094	16	2.31092	5.340351	0.486278	17	0.47899	0.229431	0.277833
	1601267503	17	3.31092	10.96219	0.696704	19	2.47899	6.145391	1.437912
	1601270183	13	-0.68908	0.474831	-0.145	15	-1.52101	2.313471	-0.88225
	1601271021	15	1.31092	1.718511	0.275852	17	0.47899	0.229431	0.277833
	1601273254	9	-4.68908	21.98747	-0.9867	15	-1.52101	2.313471	-0.88225
	1601275234	22	8.31092	69.07139	1.748834	19	2.47899	6.145391	1.437912
	1601275373	11	-2.68908	7.231151	-0.56585	15	-1.52101	2.313471	-0.88225
	1601276615	13	-0.68908	0.474831	-0.145	15	-1.52101	2.313471	-0.88225
	TOTAL	$\bar{x} = 13.68$		$\sum x^2 = 2687.496$		$\sum x^2 = 2687.496$		$\sum y^2 = 353.6975$	

The data calculation of the Listening and Speaking scores of the Binus University sophomores taking English in Focus subject during Mid Test of Even Semester in Academic Year 2012/2013 is provided below. The calculation is based on the following formula:

$$r = \frac{\sum XY - \frac{(\sum X)(\sum Y)}{N}}{\sqrt{\left(\sum X^2 - \frac{(\sum X)^2}{N}\right)\left(\sum Y^2 - \frac{(\sum XY)^2}{N}\right)}}$$

where

r	= Pearson r
$\sum X$	= Sum of scores in X distribution
$\sum Y$	= Sum of scores in Y distribution
$\sum X^2$	= Sum of the squared scores in X distribution
$\sum Y^2$	= Sum of the squared scores in Y distribution
$\sum XY$	= Sum of products of paired X and Y scores
N	= Number of paired X and Y scores (subjects)

Using the formula, we get the first Pearson r *(r)* to indicate the relationship between the paired scores of the TOEFL iBT listening results and the Business English speaking performances of the students:

$$r = \frac{27644 - \frac{(1629)(196)}{119}}{\sqrt{\left(24987 - \frac{1629^2}{119}\right)\left(32834 - \frac{1996^2}{119}\right)}}$$

$$r = \frac{27644 - \frac{3202614}{119}}{\sqrt{\left(24987 - \frac{2653641}{119}\right)\left(32834 - \frac{3865156}{119}\right)}}$$

$$r = \frac{27644 - 26912.72}{\sqrt{(24987 - 22299.50)(32834 - 32480.30)}}$$

$$r = \frac{731.28}{\sqrt{(2687.5)(357.7)}}$$

$$r = \frac{731.28}{\sqrt{961318.75}}$$

$$r = \frac{731.28}{980.46}$$

$$r = 0.74$$

Based on the variance table of TOEFL iBT listening and Business English Speaking scores, we could make the scatterplot to represent each individual's z scores on both dimensions, which are Independent and dependent variables. The z scores on the horizontal axis are those of the TOEFL iBT Listening scores (independent variable), with the lowest z scores on the left and the highest z scores on the right. The z scores on the vertical axis are those of the Business English Speaking scores (dependent variable), with the lowest z scores at the bottom and the highest z scores at the top.
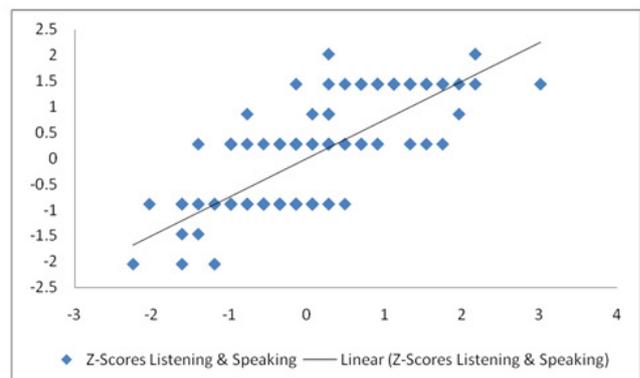
Figure 2 The Scatterplot of TOEFL iBT Listening and Business English Speaking Scores

The next step is to decide whether these observed correlation coefficients are statistically significant. With the Pearson r, the degrees of freedom (df) are the number of paired observations (N) minus 2. A significant r is equal to or larger than the tabled value with $N - 2$ degrees of freedom. The df for these calculations is $119 - 2 = 117$.

With $df = 117$ when a two-tailed test is performed, an observed Pearson r more than $+.1946$ or less than $-.1946$ is required to reject the null hypothesis at the .05 level. With the same degrees of freedom, an observed Pearson r more than $+.2540$ or less than $-.2540$ is required to reject the null hypothesis at the .01 level.

The coefficient of correlation $(r = .74)$ exceeds the values of both $+.1946$ and $+.2540$, and thus, is statistically significant at both .05 and .01 levels. As a result, the first null hypothesis would be rejected, and we conclude that the TOEFL iBT Listening scores are significantly related to the Business English Speaking scores among BINUS University sophomores in English in Focus Mid Test of Even Semester of Academic Year 2012/2013. Since the obtained coefficient $(r1 = .74)$ is between $+.30$ (weak positive correlation) and $+.80$ (strong positive correlation), we conclude that high scores on TOEFL iBT listening mid test generally mean high scores on the Business English Speaking performances of the Binus university sophomores studying English in Focus in the Even Semester of Academic Year 2012/2013.

The scatterplot of the Pearson r shows that the dots do not really form a narrow band near the line, so there are a moderate linear relationship and a moderate positive correlation between TOEFL iBT Listening scores and Business English Speaking Scores among Binus university sophomores studying English in Focus in the Even Semester of Academic Year 2012/2013.

CONCLUSION

Based on the significance of the Pearson r $(r1 = .74)$, TOEFL iBT listening scores are positively associated with the Business English speaking scores among Binus university sophomores studying English in Focus in the Even Semester of Academic Year 2012/2013. The relationship between the paired scores is not strong, but not weak either. Furthermore, based on the computation of the z scores of Listening and Speaking scores of the students, the scatterplot shows that there is a moderate degree of linear relationship between the paired z scores. Thus, based on the statistical results, it could be concluded that the more Binus university sophomores achieve high scores on TOEFL iBT listening test, the more likely (not most likely, not least likely) they tend to achieve high scores on their Business English speaking performances as well.

Suggestions

Because there is evidence that the scores of the Listening skills of Binus university sophomores are significantly correlated in a moderate linear relationship with their scores of the Speaking skills, research suggests the following things to be applied during the teaching and learning process of an English subject for undergraduate students at Binus University. First, the more students *listen* to some language input in a certain topic, the more likely he or she is able to *speak* over the topic in his or her own way, and thus it encourages their natural and unique use of the spoken language. Second, integrated tasks are strongly recommended to be delivered more than the independent tasks, as students can learn the language skills not separately, but as a whole package, and thus it establishes a more similar condition of authentic language use that students face in the real world. Third, for integrated tasks of Listening and Speaking, it is highly recommended that fluency and clarity are given higher emphasis than accuracy, so that students are more encouraged to explore any possibility during their practice, and thus, can learn from their mistakes for better performances.

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