

## USING LINEAR REGRESSION TO ANALYZE ECONOMICS CONTENT MASTERY AND LEARNER'S AUTONOMY TOWARDS ENGLISH WRITING COMPETENCE

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### Abstract

English is used widely in education area. It is also used in higher education. Many universities put English in the curriculum. In industrial revolution 4.0., English has an important role. English for Economics is needed to prepare students to master business English and English as an international language. Writing is as the focus of English skill in this study. To support good English writing, Economics content mastery is needed before learning English. Learner's autonomy in the process of writing is also needed for writing development. In this study, economics content mastery and learner's autonomy were identified to perceive the effect on the competence in English writing. The method used was multiple linear regressions as there were two independent variables in this study. Closed-ended questionnaire was used as the instrument. The result from linear regression showed that there were partial effects and simultaneous effect of economics content mastery and learner's autonomy towards English writing competence. It means that H1, H2, and H3 were accepted and Ho was rejected in which there were significant effects among the variables. It can be interpreted that economics content while studying English for Economics and learner's autonomy in terms of independently learning English writing were significantly needed in order to enhance English writing competence. The practical implication from this study is the students do not only need to learn English, but also learn Economics content and develop independent learning for autonomy learning in the process of English for Economics learning activities.

**Keywords:** *Writing Competence, English, Economics Content, Learner's Autonomy*

### INTRODUCTION

English is used worldwide in various fields. One of the fields is in education area. Many institutions including formal education at school and university teach English in the classroom. Kramsch in Carter and Nunan (2001, p. 204) states that "the insights gained by research in intercultural communication have made English teachers aware of the cultural dimensions of language as social interaction". This study is in English for Economics field. English for Economics was taught for Management students. University students in Economics need to master English both spoken and written in order to be able to work internationally and to face Industrial Revolution 4.0. Besides spoken English, written English is also important. The students need to know how to write English well in economics area.

Writing is one the skills that needs to be mastered by the students. Reid in Carter and Nunan (2001, p. 29) states that meaningful communication is also seen with problem-solving aspects in the class. In this study, the students learn writing as part of communication in the form of writing case study in economics area. Reid in Carter and Nunan (2001, p. 29) also states that "L2 researchers have investigated students' composing and revision strategies by ethnographic methods such as case-study and speak-aloud protocols". It means that writing in the form of case study is essential to be explored.

Learner's autonomy is also important in the teaching-learning activities. Students learn to write independently. The lecturer is as the facilitator in the process of writing. Benson in Kemala (2016, p. 12) states that "Autonomy was considered as a natural product of the practice of self-directed learning which the objectives progress and evaluation of learning are determined by learners themselves". It means that the students have self-motivation in learning. Geddes and Strurtridge in Kemala (2016, p. 11) states that autonomous learners know parts that needed to be learned and the reason to learn them and can also handle problems in the process of learning. Hence, learner's autonomy is needed in the process of case study writing in English for Economics.

There are three previous studies on linear regression in English education area. The first is Yu's research (2014). It discusses English reading ability and the influencing factors. The result is English reading ability is influenced by intensive and extensive reading skills. The second is Al-Maamari's research (2015). It discusses teaching, response rate, and evaluation of teaching. The result is the predictors in the research have influences to teaching and response rate. The third is Yaman, Inandi, Esen's research (2013). It discusses teacher's language ability and self-efficacy. The result is positive meaningful correlation between teacher's language ability and self-efficacy.

Considering the importance of English in Economics area and learner's autonomy and also there are no previous studies on this area, this study focuses on discovering the significance of mastering Economics content and learner's autonomy towards English writing competence. This study has limitations in two aspects. The first is this study is conducted in South Sumatera area, specifically in Management Study Program, MusiCharitas Catholic University. The second is this study focuses on case study writing in English. The research question in this study: Were there relations of economics content mastery and learner's autonomy towards English writing competence? The research goal in this study is to find out the relations between independent variables and dependent variables.

### **Economics Content Mastery**

Economics content mastery in this study relates to the economics topics that are taught in English for Economics. The learning method to cultivate Economics content mastery uses case study. Desiraju, Gopinath, and Mesny in Lapoule and Lynch (2018: 3) state that "pedagogical case studies are designed to enable students to understand specific business and related situations". Hence, mastery in economics content is taught with case study through writing in English. Creswell (2007, p. 73) states case study "involves the study of an issue explored through one or more cases within a bounded system". There are several cases that can be solved related to situation and condition in Economics area. The students can write it in the form of text writing of case study.

### **Learner's Autonomy**

Teachers' role in learner's autonomy is important. Little and Voller in Tran and Duong (2018, p. 2) state that "the teacher plays a role as a facilitator and a counselor in promoting learner's autonomy." The teacher is not the center, but the students are the center in the teaching-learning activities. The students explore by themselves, and then the teacher gives guidance to the student.

Higgs in Kemala (2016, pp. 12-13) states four aspects that influence autonomous learner. The first is the role of the learners. Past experience of the learners determines the way they learn. The second is the role of teacher. The teacher that encourages the students to learn autonomously makes the student become autonomous learners. The third is type of task. Challenging and collaborative tasks make the students learn autonomously. The fourth is the role of environment. Learning environment determines whether the students will be autonomous learners or vice versa.

### English Writing Competence

Short writing needs several skills. They are thesis and controlling idea, paraphrasing technique, writing an introduction, providing evidence, and concluding the paper (Arnaudet&Barret, 1984, pp. 70-88). The first is thesis and controlling idea. Idea limitation and scope are made in the thesis and controlling idea. The second is paraphrasing technique. This can be made by changing active and passive sentences. The third is writing an introduction. Context, focus, coherence must be inserted in the introduction. The fourth is providing evidence. Evidence is made with examples. The fifth is concluding the paper. The conclusion is made with restatement.

Writing text is divided into six parts. They are purposes, genre, text construction, cohesion, coherence, and register (Harmer, 2004, pp. 15-26). The first is purpose. Purpose of writing will determine the content of writing. The second is genre. Different genre will influence the vocabulary choice in the text. The third is text construction. Construction means writing pattern. The fourth is cohesion. Writing cohesion includes lexical cohesion, grammatical cohesion, tense agreement, linkers, and substitution. The fifth is coherence. Coherence includes the writer's purposes and the writer's line of thought. The sixth is register. Actual language use in a specific situation must be described well.

### Research Model

The research model of this study can be seen as follows:

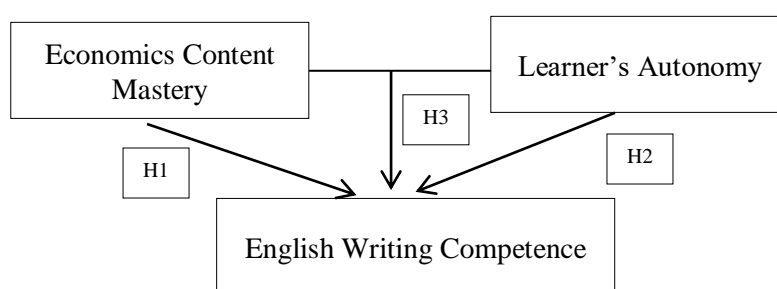


Figure 1. Research Model

Independent variable 1 (Economics content mastery) and independent variable 2 (learner's autonomy) were seen partially and simultaneously to discover the relation towards dependent variable (English writing competence).

From this study, the hypotheses are divided into four hypotheses.  
H0: There was no relation of economics content mastery and learner's autonomy towards English writing competence

- H1: There was relation between economics content mastery and English writing competence  
H2: There was relation between learner's autonomy and English writing competence  
H3: There was relation of economics content mastery and learner's autonomy towards English writing competence

## METHOD

This study used multiple linear regression methods in which there are two independent variables and one dependent variable. Gogtay, Deshpande, and Thatte (2017, p. 48) state that "regression analysis assumes a dependence or causal relationship between one or more independent variables and the dependent variables". The independent variables in this study are economics content mastery and learner's autonomy. The dependent variable is English writing competence. The data in this text are in number.

The respondents in this study were selected by using purposive sampling. The respondents were Management students of PM203 and SM201 classes of Musi Charitas Catholic University, Palembang, South Sumatera. The total number of respondent is 36 respondents.

The instrument in this study used closed-ended questionnaire. There are 30 statements in the questionnaire. Ten statements are used as independent variable 1 (Economics content mastery). Ten statements are used as independent variable 2 (learner's autonomy). Ten statements are used as dependent variable (English writing competence).

## RESULTS AND DISCUSSION

In linear regression, there were classical assumption tests that needed to be fulfilled before conducting regression. They were normality, multicollinearity, and heteroscedasticity tests. Autocorrelation test was not conducted since the data were taken once and it was not time series data format. The results of classical assumption tests were as follows.

### *Normality Test*

Normality was used to know whether the data were distributed normal or not. Based on the result from SPSS, the Asymp. Sig score in Kolmogorov-Smirnov Test was 0,662 which is  $> 0,05$ . It means the data in this study were distributed normal.

Table 1. Normality Test Result

One-Sample Kolmogorov-Smirnov Test	
	Unstandardized Residual
N	36

Normal Parameters Most Extreme Differences	Mean	.0000000
	Std. Deviation	2.63801589
	Absolute	.122
	Positive	.122
	Negative	-.068
	Kolmogorov-Smirnov Z	.729
<b>Asymp. Sig. (2-tailed)</b>		<b>.662</b>
a. Test distribution is Normal.		

**Multicollinearity Test**

Multicollinearity test was used to know whether or not there was correlation between independent variables. Based on the result, the tolerance score was 0,527, which was > 0,10 and the VIF score was 1,899, which was < 10. It means that there was no multicollinearity between independent variables.

Table 2. Multicollinearity Test Result

**Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	9.743	4.705		2.071	.046		
Economics Content Mastery	.347	.144	.371	2.411	.022	<b>.527</b>	<b>1.899</b>
Learner's Autonomy	.448	.149	.463	3.007	.005	<b>.527</b>	<b>1.899</b>

a. Dependent Variable: English Writing Competence

**Heteroscedasticity Test**

Heteroscedasticity was used to know whether there was the same variance or not. Based on the result, the Sig. score of Economics content mastery was 0,330, which was > 0,05 and the Sig. score of learner's autonomy was 0,096, which was > 0,05. It means that there was no heteroscedasticity problem.

Table 3.Heteroscedasticity Test Result

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.933	2.874		1.716	.096
	Economics Content Mastery	.087	.088	.227	.989	<b>.330</b>
	Learner's Autonomy	-.156	.091	-.394	-1.715	<b>.096</b>

a. Dependent Variable: Abs\_Res

Based on the result above, all of the tests passed classical assumption tests before conducting regression analysis. It could be seen that the data were distributed normal, there was no multicollinearity, and there was no heteroscedasticity problem.

**Partial Regressions**

After having classical assumption tests, partial regressions were conducted. From the results, the Sig. score of independent variable 1 that was Economics content mastery was 0,022, which was < 0,05 and t score was 2,411, which was > t table (2.03452). It means that there was relation between economics content mastery and English writing competence. Hence, H1 was accepted. It is as stated by Desiraju, Gopinath, and Mesny in Lapoule and Lynch (2018, p. 3) that “pedagogical case studies are designed to enable students to understand specific business and related situations”.

From the next result, the Sig. score of independent variable 2 that was Learner’s autonomy was 0,05. Although the result was equal with 0,05 and it could not be decided yet, but there was the t score to decide whether there was relation or not. The t score was 3,007, which was > t table (2.03452). It means that there was relation between learner’s autonomy and English writing competence. Hence, H2 was accepted. It is as stated by Little and Voller in Tran and Duong (2018, p. 2) that “the teacher plays a role as a facilitator and a counselor in promoting learner’s autonomy.”

Table 4. Partial Regressions Result

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	<b>9.743</b>	4.705		2.071	.046
	Economics Content Mastery	<b>.347</b>	.144	.371	<b>2.411</b>	<b>.022</b>
	Learner's Autonomy	<b>.448</b>	.149	.463	<b>3.007</b>	<b>.005</b>

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a. *Dependent Variable: English Writing Competence*

From the result of, the statistical formula of this study was as follows:

$$Y = a + bx_1 + bx_2$$

$$Y = 9,743 + 0,347X_1 + 0,448X_2$$

It means that coefficient of X1 (economics content mastery) had positive relation with English writing competence. It also means that coefficient of X2 (learner's autonomy) had positive relation with English writing competence.

Table 5. Adjusted R Square Result

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.767 <sup>a</sup>	.588	<b>.563</b>	2.717

a. Predictors: (Constant), Learner's Autonomy, Economics Content Mastery

Based on the result of Adjusted R Square, the adjusted R square was 0,563. This means the magnitude of relation value was 0,563.

***Simultaneous Regression***

After discovering partial regression, simultaneous regression needed to be discovered. Based on the result, the Sig. score was 0,000, which was < 0,05 and the F score was 23,573, which was > F table (3,28). It means that Economics content mastery and learner's autonomy had simultaneously relation with English writing competence. Hence, H3 was accepted.

Table 6. Simultaneous Regression Result

*ANOVA<sup>b</sup>*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	347.986	2	173.993	<b>23.573</b>	<b>.000<sup>a</sup></b>
	Residual	243.569	33	7.381		
	Total	591.556	35			

*a. Predictors: (Constant), Learner's Autonomy, Economics Content Mastery*

*b. Dependent Variable: English Writing Competence*

## CONCLUSION

Based on the result and discussion above, it can be concluded in four aspects. The first is Economics content mastery had positive relation with English writing competence with Sig. score was 0,022 and t score was 2,411. The second is learner's autonomy had positive relation with English writing competence with Sig. score was 0,05 and t score was 3,007. The third is Economics content mastery and learner's autonomy had simultaneously relation with English writing competence with Sig. score was 0,000 and F score was 23,573. From these three aspects, it means that H0 was rejected, and H1, H2, and H3 were accepted. The fourth is R square which was 0,563 described that 56,3% of English writing competence was described by two predictors that are Economics content mastery and learner's autonomy and 43,7% was described by another predictor. Generally, there were relations among Economics content mastery and learner's autonomy towards English writing competence

Suggestions based on the findings of this study are divided into three aspects. The first is the students need to master Economics content before learning English writing. The second is the lecturer needs to enhance students' independent learning as the reflection of learner's autonomy to have good English writing. The third is future researchers can do further study on how to enhance Economics content mastery and learner's autonomy for students.

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