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How English Foreign Language Students' Autonomy and Digital Competence Relate to Their Writing Achievement

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Abstract: This study aimed to examine the correlation between learner autonomy, digital competence, and writing achievement. It involved 92 first-year English as a Foreign Language (EFL) students who were enrolled in an intensive course (IC) program of the English department of a state university in Indonesia. This study used three types of data: learner autonomy level elicited by using a questionnaire, digital competence level elicited by using a questionnaire, writing scores that were obtained from the coordinator of the IC program. The research methodology used in this study was quantitative research. The bivariate Spearman correlation was applied to know the correlations between learner autonomy and writing achievement and the correlation between digital competence and writing achievement. The multiple linear regression was computed to examine the correlation of the combination of learner autonomy and digital competence towards writing achievement. The results of the study confirmed that learner autonomy was strongly correlated with writing achievement and digital competence was moderately correlated with writing achievement. The result also showed that there is a statistically significant correlation between a combination of learner autonomy and digital competence towards writing achievement. Therefore, pedagogically, teachers of EFL writing are suggested to promote autonomous learning and at the same time, use technology to foster EFL students' writing achievement.

INTRODUCTION

Substantially, the outcome of achievement contributes writing to academic performance (Kyle & Crossley, 2016). In fact, for English foreign language (EFL) students, particularly in Indonesia, achieving higher writing performance is the most challenging aspect in language learning (Aunurrahman et al., 2017; Sihombing et al., 2015). Hidi & Boscolo (2007) states that writing achievement, in simple terms, is the level of students' self-efficacy of using various strategies to shape their writing attitude.

In upgrading writing achievement, several attributes can be involved to support a better writing learning process. Learner autonomy and digital competence are two essential attributes in the language learning process in this era of development information of and communication technology (ICT) nowadays (Alkan & Meinck, 2016; Beseghi, 2018; Cömert & Kutlu, 2018; Kim, 2014; Wilde, 2014; Yuliani & Lengkanawati, 2017). In language learning, in particular, autonomy and digital competence lead students to effective mastery of language skills (Ayllón et al., 2019; Beseghi, 2018; Rohatgi et al., 2016). As far as concerned, students' autonomy can be understood as the degree of students taking control of several factors such as pace, timefrequency, the topic of interest, method of learning, and goals in the learning process (Benson, 2011). Figure 1 shows Benson defining autonomy as the capacity to take control over learning.

Another attribute attempts to digital competence that is the ability, literacy, and behavior of students in using digital media in the learning process for educational purposes (Hatlevik et al., 2015). Figure 2 shows the framework of digital competence.

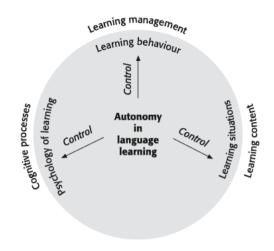


Figure 1. Dimensions of Autonomy (Benson, 2011)

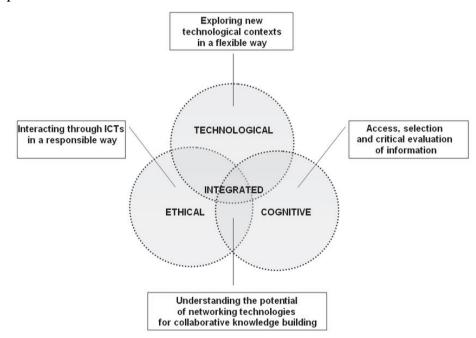


Figure 2. Digital Competence Framework (Calvani et al., 2009)

Figure 2 shows how the interdependence of three dimensions and their integrations (Calvani et al., 2009). Hence, the immense potential for autonomy and digital competence in every learner should not be neglected in the teaching and learning process.

Over the past few decades, specifically, much emphasis has been put on learners' autonomy towards the achievement (Amiri & Sharifi, 2014; Boyadzhieva, 2016; Ding & Stapleton,

2016; Tran & Duong, 2018). More recent research on autonomy orientates to examine the connection between learner autonomy and achievement in learning. A large scale study conducted by Ghorbandordinejad and Ahmadabad investigated 400 Iranian EFL students' autonomy level in secondary school and their achievement by considering foreign language classroom anxiety mediation. Their research indicated that there is a positive relationship between learner autonomy and English achievement (Ghorbandordinejad & Ahmadabad, 2016). The more recent correlational study involving 630 Saudi Arabian EFL students reported a significant positive correlation between students' autonomy and their achievement. The students who reach a high score tended to have a high degree of autonomy and vice versa (Alrabai, 2017). Thus, the studies provide valuable insights into the potentiality of autonomous learners to succeed in the learning process.

Following of the importance autonomy in learning, Previous research suggested that it was beneficial to encourage students to use technology outside the class (Camilleri et al., 1999). The limited-time for learning in school should not be a problem for students and teachers today. In line with Camilleri, the previous study confirmed that students who have digital competence would effectively develop their autonomy for lifelong learning. Also, technology can accommodate learners' needs or modify their behavior toward their best strategy in learning (Echenique et al., 2015).

Several previous research has also found a significant influence between digital competence and language learning achievement (Alkan & Meinck, 2016; Hatlevik et al., 2018; Juhaňák et al., 2019; Rohatgi et al., 2016). These scholars believe that with digital competence, students have better achievement than students with lower digital competence (Rohatgi et al., 2016). In line with other studies, Juhaňák et al. (2019) state that students whom confidence with their digital competence will relish and endure challenges in learning. Another research finds that the more successful students receive beneficial use might of technology (Hatlevik et al., 2018). Together these results provide important insight into the linkage between digital competence and learning achievement. subjects However. the research in previous studies (Alkan & Meinck, 2016; Hatlevik et al., 2018; Juhaňák et al., 2019; Rohatgi et al., 2016) were primary and secondary students. Thus, there is a need to understand the relationship of digital competence and learning achievement involving various subjects in the EFL context, such as adolescents or intermediate learners at the university level. Hence, the level of the students in the previous study was different from this current research.

Following the important role of and digital competence. autonomy numerous research on EFL writing has led to renewed interest in the transformation of the way students compose and write (Andina et al., 2019; Boudjadar, 2014; Widiati & Cahyono, 2016). Digital competence is considered a prominent factor to implement technology to enhance writing skills (Hatlevik et al., 2015). Technology provides a vast potential for students to access various resources in composing a writing product (Boudjadar, 2014). Also, providing various relevant sources would likely be students improve their helped to composition writing (Ilahiyah et al., 2019). Nevertheless, research on the relationship beyond autonomy, digital competence, and writing achievement is relatively rare in the EFL context. Particularly in Indonesia, this current research will shed light on the potential of autonomy, digital competence to promote writing achievement.

This current research seeks to obtain data that will help to address these research gaps. Three primary aims of this study are formulated into the following research questions: 1) To investigate any correlation between EFL students' level their writing autonomy and achievement, 2) То ascertain any correlation between EFL students' digital competence writing and their achievement, and 3) To discover any correlation between the combination of EFL students' autonomy level and digital writing competence and their EFL

achievement. The results of this current research showed the degree of relationship between students' autonomy, their digital competence, and writing achievement.

METHOD

This study applied a correlational design. It was employed in one of the Malang, universities in East Java. population was Indonesia. The all students enrolled in the academic year of 2017/2018 in the English department of the university. The sample of the study was taken by using non-proportional stratified random sampling from a total of 320 Considering students. the homogeneity of the population, the firstyear EFL students were chosen in this study. Ninety-seven students consisted of 25 (27.7 %) male students and 67 (72.3 %) female students who were enrolled in the writing class as part of the intensive course (IC) program.

Students' writing achievement was obtained from students' writing scores in the IC program. The writing test was compulsory at the end of the program. The students were asked to write a 200word essay with a self-selected topic. The students' essays were assessed based on five criteria consisted of content. organization, word choice, grammar, and mechanics (Jacobs, 1981). After the writing administration, test each participant was given two questionnaires. To measure the autonomy level, the questionnaire was adopted and modified from the language learner autonomy in tertiary-level learners' of English developed by Dixon (Dixon, 2011). The questionnaire contains 15 questions and covers four dimensions (control, strategies, confidence, and behavior), focusing on writing.

The digital competence questionnaire was adopted and modified from version II of the technology implementation questionnaire developed by the Centre for the Study of Learning

Performance (CSLP) at Concordia University, Montreal, Canada. Although the instrument was addressed to teachers, the process of integrating the technology section was also appropriate for students (Lowerison al., 2006). et The questionnaire consisted of 20 items that represented instructional, communicative, organizational, analytical, recreational, expressive, expansive, creative. evaluative, and informative dimensions. Both questionnaires were administered through an online questionnaire with informed consent to the 97 students and 92 of them completed and returned the questionnaires. Since the design of the study was partial correlational design, the bivariate Spearman and multiple regression were utilized using by Statistical Package for the Social Science (SPSS) 22 to analyze the result.

RESULT AND DISCUSSION

The results of the study are presented according to the order of the research questions.

CorrelationbetweenLearnerAutonomy and Writing Achievement

A Spearman's rho was used to examine the correlation between learner autonomy and writing achievement. The result of the analysis is presented in Table 1.

Tab	le 1.	Cor	rrelation	between	Learner	Autonomy
and	Writi	ng /	Achiever	ment		

Spearman's rho				
	Correlation Coefficient	1.000	.800**	
Writing Achievement	Sig. (2- tailed)		.000	
	Ν	92	92	
Learner	Correlation Coefficient	.800**	1.000	
Autonomy	Sig. (2- tailed)	.000		
	Ν	92	92	
**Correlation is significant at the 0.05 level (2-				
tailed				

Table 1 shows that there is a strong positive correlation between learner

autonomy and writing achievement (r =0.800). In other words, the higher the level of learner autonomy to learn writing, the better their writing achievement. The score of the p-value (0.00) is less than α value (0.05).

Correlation Digital between **Competence and Writing Achievement**

Spearman's rho also was used to analyze the correlation between digital competence and writing achievement. The result of the analysis is shown in Table 2.

Table 2. Correlation between Digital Competence	
and Writing Achievement	

Spearman's rho				
Waiting	Correlation Coefficient	1.000	.443**	
Writing Achievement	Sig. (2- tailed)		.000	
	Ν	92	92	
Digital	Correlation Coefficient	.443**	1.000	
Competence	Sig. (2- tailed)	.000	•	
	Ν	92	92	
**Correlation is significant at the 0.05 level (2-				
tailed				

Table 2 depicts that there was a moderate relationship (r = 0.443) between the capability of using technology in writing and writing score. In other words, the more capable of students in using technology, the higher their writing scores.

Correlation between Learner Autonomy and Digital Competence towards their Writing Achievement

Multiple regressions were carried determine whether to writing out achievement could be predicted from learner autonomy and their digital competence. The result of the analysis is shown in Table 3.

Table 3. ANOVA Output from Regression Analysis

	Model	Sum of Squares	Df	Mean Square	F	Sig.
	Regression	2656.61	2	1328.31	56.73	.000 ^b
1	Residual	2083.68	89	23.41		
	Total	4740.30	91			
~	Demondant Variables Writing Ashievement					

a. Dependent Variable: Writing Achievement

b. Predictors: (Constant), Learner Autonomy, **Digital Competence**

Table 3 presents the result of the ANOVA F-test, which indicated that the null hypothesis was rejected. In other words, 55.3 % of the variance in writing achievement is explained by learner autonomy and digital competence. The Ftest (56.736) is higher than F-table (3.10), meaning that the model explained had a highly significant amount of the variance in writing achievement. The result of the p-value (0.00) is lower than the α value (0.05). It can be seen that there was a simultaneous relationship between the combination of learner autonomy and digital competence towards writing achievement.

The result of further analysis is presented in Table 4, which revealed the coefficient between learner autonomy and digital competence.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	В	Std. Error	Beta	_	_
(Constant)	14.25	6.93		2.05	.043
1 Digital Competence	.025	.045	.039	.55	.481
Learner Autonomy	.705	.066	.749	10.65	.000

a. Dependent Variable: Writing Achievement

As shown in Table 4, the coefficient of learner autonomy (0.00) is less than 0.05. However, the coefficient of learners' digital competence (0.481) is higher than 0.05. Thus, while the combination of learner autonomy and digital competence is correlated with writing achievement, learner autonomy contributes more than digital competence in predicting the correlation.

This study has examined the relationship between 1) learner autonomy and writing achievement, 2) digital competence and writing achievement, and 3) the combination of learner autonomy and digital competence towards writing achievement. Therefore, this study offers some significant theoretical and practical contributions. Several previous studies revealed the relationship between learner autonomy and writing achievement. The current study found that the higher level the learner autonomy to learn writing, the better their writing achievement. This result confirms the previous research, which revealed a moderate positive relationship between learner autonomy and writing ability (Bazrafkan & Bagheri, 2014).

A previous study showed that there is a positive effect of learner autonomy towards students' writing achievement (Masita, 2016). She found that higher learner autonomy is critical to enable students to achieve a better score in writing. The finding has an important promoting implication for learner autonomy in the teaching and learning process of writing, as verified by Cömert and Kutlu (2018). In other words, developing autonomous language learning is necessary to improve the quality of teaching and learning. Another important practical implication is that selecting proper methodologies and techniques to create autonomous learning an environment might be valuable for an effective teaching and learning process. Figure 3a is one of the examples of a learner's composition in which the writer has less autonomous and Figure 3b is one of the examples of a learner's writing which the writer has more autonomy.

ARGUMENTATIVE ESSAY WORKSHEET	Tepse (1)
	Title: Online stop is the bat place, charle. * Online stop more expected than traditional shop
1.	* Online shop always give the customers pres shifting
Shopping on online shopping	* fine in online shop is cheap than truchitonal shop
shopping is one of my favorise activity. who doesn't	Bulandonecima tilly wendere also being thereas the
like phopping? I think, everyone likes to phopping usually	
people can Spent their time and money to Shapping, Manufacture	Nowdays, in this era we can shopping without
raupie cart spent their time and times a article methods	have to go to the made we can shopping when we in the
White the te	oppice, when we in the college or maybe when we don't have a to much a time. with online shopping we can shopping
Sometimes theld use motole phone to buy everything	where everything we want, and we don't have to thread
they need they just instal online shapping like shape,	to as find out what we want because in online shopping
	everything you would exactly there's have that is the
toko pedra or enything else.	That is why online shopping is more practice and eppettive
	than Tractitional shop
ontine shapping can help people to buy something	the good service. Like in online shopping always give the austomer the good service. Like in online shop shopped there's always
marc efficiently. They just choose what they want or	give the customer the cucher dicaint the for the shipping.
	Then, Tokopedica there's we can credit to bay the item.
what they needed and then transfer money, just it.	and many more.
	And for the price in online shop is more
For me, online Shapping is smart chalces. IF	cheap than traditional shop. But, the item on online shop is also good them traditional shap. That is when
I we don't have have to spent so long in Mall and	In people choose online shop than traditional shop. Not just
so help full to working my time.	Cheap but to the Hem is good.
20 utroblati in analitical tudi tinta .	be, online shop is the best choice for people
	por the customer with on
Online shopping help people to buy things	Maybe, without online shap people must be
more epperately, not wasting your time, the you don't	deals in maanichas shop but how if the other people
have to go to mail and looking for what you need,	don't have a time or maybe barre not have mach a time
where new construction of the	so, online shap is the last chairs the
ALLE VIEW OFFICE	ter shapping? ter shapping? people like that we don't have to go to the mall

Figure 3. Learner's Writing Product

Numerous studies investigating digital competence and achievement have

been carried out on a correlational study. The result of the study indicates that the decisive point on the moderate value of the relationship between students' capability in using technology and their writing score. It is assumed that the digitally literate students are the students who can use appropriate technology to help them in writing a composition. It demonstrates the students who can navigate the educational technology for writing; are likely to will achieve great accomplishments in writing. Figure 4a is one of the examples of a learner's composition in which the writer has a lower capability score in digital competence and figure 4b is one of the examples of learner's writing in which the writer has a better capability score in digital competence.

ARGUMENTATIVE ESSAY WORKSHEET	ARGUMENTATIVE ESSAY WORKSHEET
The effect of television for our lover	Eppen of Social Media - on young people
the offers of the first on the prot	Social media and social networking isen to play an imperiety part of people
	diver around the world. There are isome who debate whether is is improved a defin
Television can be used to educate and improve our lives.	communication sail Stiping behind to computer upon municating with cyber friends can t
IF what we watch is channel some good channel.	rasy and put that the weaker a petrain versal communication shill that not
and Television can be harm to us or our children it what	only prow one the predime imped on compution because there are some
	positive impact on communication through social Media. In modelin life, social
we watch is bad channel. Example of good Channels to Watch	media is developing early this used by many people all over the word. Social media is especially very popular among the yourg However, there are many your
are : News, quiz, Stories of legend, etc. by warching the	people who contral contral themselves and are additioned to pool al median. Additional
channels we can add the insight and knowledge to us.	to social media has many schous effect; including poor study habers, living away
example of a channel that is not good for education and to	from readily and bad health.
Improve our lives likel ; yossip, etc.	First, addition to social media makes the youth have bad gods in sheller.
improve our and inco i gossie, erc.	Because of social media many student who were excellent shudent have become
We can determine whether the felevition is good or not	bod student. Every dray, these orwers come to class, but they do not focus on studiuling. While their profession are timeching, they are using celliphones to sing pacetos
o us. If we want the television good effect to our laters	studying. While their propress are tending, and the using coophares to be proceeded instances on the truth truth on messenger. They always check their colliptenes
10. Olen a good channel, avoid watching things that are	owing rive minutes to be read is online on an social meta
not important many channels are of 1Atle value to edución	Lear strendly young people who are addicted to social media can be far an
in the la maker the former to for the to be the	from reality. Because of using a cell phones all day, they will not have
we live in modern times, everyone bus a television, we can't	time for outdoor activities such as playing sports or compiling instead or given
requiste what should be displayed on television., for we can	and to meet friend or sail to their parent, these people love chatting with friend on social media. They will just some or home and update their news
Choose she best channel for us.	friend on social media. They will just such a norme and update their hears on social media. Gradually they will only live in a virtual world.
many chunnels that can help the growth of children.	And last but not kast, using social media too much will have a serious
like now, there are than toufil over an showy, lectures,	impad on health. Because the yours are addided to social medin , they will
education division of the Mark and the state of the state	as to bed late to read hows on facebook or chat with friend Staying up
education quieres, etc. that countrel can help our children	late is really harmful to the healt, especially the brain. ip the young do not
to arouth up-	Seep anaugh, their health will be accepted soriously by loining weight or always petim tind. Their brains also will not work effectively and they will be in sleep and the
So, let's more selective to choose . I the church what	the conclusion, although using solid methy has many benefits in our lines.
we will be watch.	addition to social media is not good. It will have awful influence ons studying,
	make us live way pan reality and have bad eged on halth. In order to avoid
	loning addided to social media young people should sover more time playing
	sport returdying and taking pirt in achivities in schools
	in the second se
а	b

Figure 4. Learner's Writing Product

This finding further supports the idea that there is a link between technology and writing achievement, in which the previous study found a minimal relationship with it (Sisco & Thomas, 2008). In contrast, the present study revealed a moderate relationship between students' digital competence and writing achievement.

However, the previous research finding Sisco and Thomas (2008) found that there is no statistically significant relationship between the capability of using technology and students' writing score. Further, they attempted to focus on secondary students (Sisco & Thomas, 2008). One of the issues that emerge from

these findings is the maturity of students in integrating technology in learning writing. From the finding of the present study, it can be assumed there is a different result of the relationship between digital competence and students' writing achievement in secondary and higher levels. There is ample room for further progress in determining other levels of students.

Several research studies proved that there is a close relationship between learner autonomy and digital competence in students' writing achievement. Some prior studies revealed that the contribution of learner autonomy and technology had accomplished better writing achievement (Janfaza et al., 2014; Tan-Ooi, 2013). The present study also demonstrated that there was a positive correlation between the combination of learner autonomy and digital competence towards writing achievement.

CONCLUSION

The results revealed that there is a strong correlation between learner autonomy and writing achievement, and there was a moderate correlation between digital competence and writing Besides, achievement. there was a significant correlation between the combination of learner autonomy and competence digital towards writing achievement. It shows that when students get better with digital tools, they can experiment more with the writing style and thus become better writers.

In light of these findings, EFL teachers are recommended to consider encouraging or training the students to enhance their autonomy, and digital teaching writing. competence while Accordingly, both learner autonomy and digital competence play essential roles in the successful learning of writing. In learning to write, in particular, the students need to be trained in using appropriate educational technology, which promotes learner autonomy to achieve good writing. However, these findings are limited by the use of a quantitative research design. It is recommended to further study to examine more closely the linkage of learner autonomy, digital competence, and writing achievement.

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