

## THE EFFECT OF ICT AND LEARNING STYLES ON STUDENTS' WRITING ACHIEVEMENT

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### **Abstract**

*The purpose of this research was to find out whether there is any significant difference result of writing achievement between learning styles (introvert and extrovert), whether there is any significant difference result of writing achievement in the use of ICT (Blog and Facebook), and whether there is a significant interaction of learning style and the use of ICT on students' writing achievement. A quantitative analysis that included descriptive statistics (mode, median, range, mean, standard deviation, and the distribution of frequency in histograms), and inferential analysis (ANOVA) tests were conducted to answer the research questions of this study.*

*The respondents of this study were the fifth semester students (regular class) taking the Writing IV program at English department of Pamulang University academic year 2015/2016. Out of 90 students of the population, 48 (24 introvert and 24 extrovert) were chosen as the samples based on the cluster random sampling. To collect data, the study used two kinds of instruments: a writing test, and two questionnaires. The result of this study revealed that out of two independent variables, only the variables of learning style affected students' writing achievement ( $p - \text{value} < 0.05$ ) with mean score extrovert students were higher than introvert students. However, the different use of ICT did not give significant effect on students' writing achievement ( $p - \text{value} > 0.05$ ). But the overall use of both facebook and blog through different students' learning styles had not shown significant interaction on students' writing achievement ( $p - \text{value} > 0.05$ ). Thus only one alternate hypothesis was accepted in this study.*

*Keywords: Learning styles, the use of ICT, writing achievement*

### **1. INTRODUCTION**

In the modern era, it is very important for all people especially students to master English in their daily activities. As citizens, who live in developing country must be able to interact with other people from other districts, and by using English as their daily language, they are able to communicate with them easily without having any obstacles. Communicating with other people can be done through some media like mouth, symbol, letter, social media, and others. Basically, most people prefer communicating orally to communicating their ideas in written way since they think spoken way is more interactive and attractive than written ideas. They easily transfer their ideas to listeners and get the feedback.

On the other side, for those who are hesitant to speak up, they prefer writing to speaking to deliver their ideas. Therefore, it is essential for everyone to learn how to write. It is clear writing is a gift from Allah SWT for every human; they have the same ability to write, but the difference is the way they write their ideas. In the technological era, a lot of media and electronic devices are developing like computer, note book, laptop, smart phone, and other devices; they help people deliver their ideas easily to the readers. They are able to use one of these devices to ease them to write their opinions and thought, and they can publish instantly, so many readers can read the information. The big question is why should students learn how to write their ideas well? Writing can be implemented in several essential sectors like education, journalism, politic, economy, and others sectors. If students are able to write their thought properly, they can share their ideas in these sectors. By writing more and more, their writing skill will be improving by the process.

In fact, most people feel more challenging if they deliver their ideas in written context since they have to focus on several important aspects in writing like grammatical sentences,

punctuations, capitalization, coherent content, and other aspects. Although they do not meet the audiences directly, they must be able to deliver their ideas properly to their readers, and it is not a simple way to do. Actually, these problems are also faced by many students who are in the secondary and higher levels.

In the secondary level, students must be ready to generate their ideas in a paragraph to several paragraphs. They learn a lot of fundamental information about how to write well. In fact, students did not learn a lot about it since teachers just asked them to write without giving more information about punctuations and how to choose the proper words. For the consequences, the college students do not have any proper information about how to generate ideas well in a paragraph and develop it into some paragraphs. Thus, it is important for the teachers to teach them several basic elements in writing.

The writer has been teaching for several years in secondary and higher level. After having observation, the writer concludes that most students in secondary and college students have similar problems in writing, they have the ability to write, but they do not know how to generate their ideas well, how to place punctuation, how to choose the proper words, and other problems. These problems are also faced by the Pamulang university students especially in the fifth semester. In the fifth semester, they must be ready to develop their ideas into an essay with the varieties of essays. They say it is complicated process for them to explore their limited ideas to unlimited ideas, and they must create coherent sentences and paragraphs in order to make readers easily get the information.

To resolve these problems, teachers must find some new ways to teach writing for the students. The first thing they should do is finding the interactive and modern media for students write their ideas in classroom or whenever they are. Most teachers focus on giving writing task for students in a piece of paper, but they ignore the use of technology. In reality, a lot of students like operating their note book, smart phone and other gadgets, and the gadgets do support them to write; they are able to write whenever they want and wherever they are because they are not forced with the time and location. In this case, teachers must be familiar with some gadgets and social media students use in their daily activities, or it is popular with ICT (Interaction Communication and Technology). In this era, a lot of universities have implemented the use of ICT in teaching and learning process, and many college students must have at least one or more social media on their smart phone, and they can use them not only through smart phone but also other gadgets. In this research, the writer will focus on choosing two popular social media to write like Facebook and blog. Facebook and blog can be interactive media to express students' feeling, emotion, opinions, thought, and others. They have freedom to write whatever they want, but if it is supported with the proper information about how to write well, students will be wise when they deliver their ideas on Facebook and blog.

The second way is from the students' side. Teachers not only know the proper media for students to write but also the students' characteristics. The proper media will be appropriate with the students' characteristics or student's way to learn something. This combination will create new innovation for teachers and students in order to improve students' writing skill and get teachers' target. In this research, the writer will observe two kinds of students' learning styles like introvert and extrovert students. The writer chooses these two learning styles because it is clear extrovert students will be appropriate with the media of ICT, and the introvert students who enjoy themselves by working alone and have less interaction with others will also feel comfortable and joyful if they use Facebook or blog when they deliver their ideas in written way.

According to the above explanation, the writer is eager to investigate the effect of using ICT and students' learning styles on students' writing achievement for the fifth semester Pamulang University students. By doing this research, the writer hopes the students' styles in learning something and the use of both Facebook and blog as the media to write help students deliver their ideas well and properly, and this combination will enhance and give the positive effects on the students' writing achievement.

*Limitation of the study*

The writer focused on the use of ICT: blog and Facebook and learning styles: introvert and extrovert to their impacts on students' writing achievement

## **2. THEORETICAL FRAMEWORK**

### **a. Understanding of Writing**

#### *The Processes of Writing*

Students should also be familiar with the writing processes. Knowing writing processes will help students write and have proper content organizations. Oshima and Hogue argue that there are some processes of writing: prewriting, planning, writing, and revising draft. In prewriting process, students need to do some steps: choosing and narrowing a topic and brainstorming. If student students get assignment to write and have some guided topic, they will have limited topic to write, and they also focus on finding the ideas related to the topic. On the other hand, if they get free topic, they are able to write topic which they are interested in. they seldom find difficulties in generating the ideas because they know the topic well. For the suggestion, students need to find simple topic, and the topic must be familiar with them in order to ease them to write. Next, students do brainstorming. Brainstorming can be done by listing or clustering. Making list can be done by listing some ideas from the first to the end of ideas. It looks like students make a list of shopping; meanwhile, clustering can be done by creating clouds, and in each cloud, students write down the ideas, it looks like bubbles.

In addition to prewriting process, planning is the second process to write. Students should create the topic sentences first. They also create the minor sentences to support the topic sentence. Then, students need to write the outline that has topic sentence and some supporting sentences. Next, the writing process is the main process in writing. Students explore their ideas more and more by focusing on the outline that students have made before. In this process, students should create coherent sentences and paragraphs by placing the proper connectors. Then, students need to revise the content and organization. Therefore, students need to reread all contents and organizations. If there are some mistakes, the students are able to revise by giving mark to the wrong word or content, or students are able to underline or cross the mistake. The last is writing the final copy.

#### *Kinds of Essay*

Essay is combination of paragraphs which discusses one thesis statement. In one essay, it should have three main components: introductory paragraph, body paragraphs, and concluding paragraph. Introductory paragraph discusses the background of the topic including definition, history, and others; it should also have one thesis statement. A body paragraph is the whole explanation from the thesis statement. Moreover, concluding paragraphs signs the end of ideas. It concludes the whole explanations.

Bianco claims there are some types of essays: narration, description, cause and effects, comparison and contrast, and argumentative or persuasive essay (Martha J. Bianco, 2008, 1-7). Narrative essay tells the history of something. it can be the autobiography of someone or the past story. Descriptive essay discusses a topic in a particular way or in detail by giving specific information and reader can feel present. Comparison and contrast discusses two different sides of views like pro and contra. Cause and effect essay discusses relationship, reasons, and how one thing led to another. The last, argumentative essay is arguing & supporting your position. To conclude, a type of essay will deliver different purposes, and students will create different thesis statement. In this research, the writer will use the kind of argumentative essay as the instrument.

### **b. Interaction Communication and Technology**

#### *Understanding of ICT*

The use of interaction and communications technology has been implementing in many educational institutions started with the elementary to higher educational levels. However, several institutions in isolated areas or villages are not able to use the ICT because of the net working and other factors. The use of ICT spends a lot of fund to conduct it in every school;

therefore, if the schools have good facilitations, they are not hesitant to use ICT in their schools. However, for the schools which do not have fund to conduct it, they prefer using manual way to teach. It costs a lot of fund because it must use computers and other modern devices.

Generally, the use of ICT in schools delivers several benefits for the users. ICT can ease teachers to teach. It provides images used in teaching and improving retentive memory of students. Students easily understand the topic and have fewer obstacles. Teachers can easily explain complex instructions and ensure students' comprehension since the teachers do not need to write down all explanations on the whiteboard, and they do not need to waste their time to clean it. They can focus on explaining the topic and make sure the students understand about it. ICT is an interactive media for both teachers and students. The last, teachers are also able to create interactive lesson of ICT in order to make joyful classes like giving interactive games through the use of it.

To conclude, the use of ICT is able to help teachers and students learn in teaching and learning processes. ICT provide a lot of information for users, and it can media for teachers to help them teach students and introduce students to the modern devices.

#### 1. Facebook and Writing

Facebook is one of popular social media today; all levels prefer operating facebook to other social media. It provides users a lot of interactive and interesting features, and they are able to do whatever they want like playing games, uploading photograph, sharing opinions, sending messages, and other interesting online activities. The use of facebook helps students to explore their ideas more and more, they get the instant feedback from their friends, they can also minimize their errors when they writer compositions, and they are allowed to express the information they want (White, 2005,p.28). Computer-mediated communication creates fun atmosphere and activities for students and students dominated (Wu & Starr, 2003, p.688). He also adds that CMC motivates students to access their social media or online activities anywhere and everywhere (Wu & Starr, 2003, p.687). Hence, the use of facebook eases stduents to update their information and explore it on facebook.

#### 2. Blog and Writing

Blog is one of media that writers use to share the information they got before. It can be also a media for writer to explore their ideas. Many college students prefer using computer-mediated and feel joyful writing with computers especially blog (Brad, John, & Naeko, 2006). Pinkman had ever been given the assignment through blog and when he checked, he read a lot comments from their peers and his teacher. It made his motivation up (Pinkman, 2005, p.20). Writing in blog looks similar to writing journal; users can update their ideas, so it makes their information grows (Lamshed, Berry, & Armnstrong, 2002). Therefore, the use of blog is really meaningful media for the students in order to improve their writing achievement.

### c. Students' Learning Styles

#### 1. Understanding of Learning Style

Learning style is a student way to learn something; the way can be different among students in a classroom. The differences are affected by their habit, environment, friends, and the kinds of task given. The students' ways to learn something is not permanent, and they are not able to change it, but it depends on the students' environment, task, situations, and other affected factors (Patryija, 2014, p.3). Learners probably have the varieties of styles when they are learning, and it is the action of students, but it is the students' characteristics (Graeme, 2008, p.4).

#### 2. Introvert, Extrovert and ICT

Introvert student is a person who has several characteristics: he/she enjoys with himself/herself, he tends to be shy when he meets someone else, he enjoys works alone, and others. Thus, these communities tend to close themselves from others and like to imagine with their mind. However, extrovert students have the opposite characteristics with introverts; they enjoy interacting with other people, they enjoy working in team and discuss

with many people around them, and other characteristics. The most difference bet when introvert and extrovert is the extroverts will more confident when they interact with others and show off their skills. Whilst extroverts need to be stimulated by being around others, introverts obtain their energy from within. Extrovert people, more than the introvert, also have a tendency to need excitement, physical activity and social interaction (Hills and Argyle, 2001). Orchard and Fullwood (2010, p.158) state that “introverts were significantly more likely to be drawn toward online communication than extraverts”. Orchard and Fullwood (2010, p.158) state that “introverts were significantly more likely to be drawn toward online communication than extraverts”. They are more attracted to online communication than extroverts (Goby, 2006) because of the lack of intimidating features that accompany face-to-face communication (Orchard and Fullwood, 2010).

**3. METHOD**

**a. Participants**

A total of 48 the fifth semester students from Pamulang University participated in this research. The students were taken from the regular morning. The 48 students were divided into four groups: two groups were introvert students who used blog and facebook, and two groups were extrovert students who used blog and facebook.

**b. Data Collection**

Two instruments were used in this study: writing test and questionnaires. For the writing test, participants had to write one argumentative essay. Two kinds of questioners were used in this study: the questioners of learning styles (introvert and extrovert) and the questionnaire of the use of blog and facebook in writing. These questionnaires help the writer know the students’ styles and their opinions about the use of blog and facebook.

**c. Data Analysis**

In addition to the descriptive statistics such as frequency, percentage, mean and standard deviation, range, the distribution of frequency in histograms, and two-way ANOVA, to identify the variables that predict students’ writing achievement with different learning styles and the use of blog and facebook. All of these analyses had been completed by using SPSS version 17.0

**4. FINDING**

The hypothesis test on this study was applied by using analysis variances in two ways (ANOVA).

**a. Descriptive Statistics**

Table 1: Descriptive Statistics  
Dependent Variable: WRITING TEST

MEDIA	LEARNING_STYLES	Mean	Std. Deviation	N
FACEBOOK	INTROVERT	65.17	10.495	12
	EXTROVERT	72.33	10.941	12
	Total	68.75	11.105	24
BLOG	INTROVERT	64.75	11.802	12
	EXTROVERT	69.00	8.728	12
	Total	66.88	10.381	24
Total	INTROVERT	64.96	10.925	24
	EXTROVERT	70.67	9.827	24
	Total	67.81	10.676	48

Table 1 shows the descriptive statistics of participants’ learning styles and the use of blog and facebook. There were 24 introvert students who did writing test through facebook. The introvert students who used facebook were 12 students with the mean is 65.17, and the

standard deviation is 10.495. The introvert students who used blog were 12 with the mean is 64.75, and the standard deviation is 11.802. On the other hand, there were 24 extrovert students who did writing test through facebook. The extrovert students who used facebook were 12 students with the mean is 72.33, and the standard deviation is 10.941. The introvert students who used blog were 12 with the mean is 69.00 and the standard deviation is 8.728.

**b. Inferential Analysis**

Table 2: Tests of Between-Subjects Effects

Dependent Variable:TEST

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	458.729 <sup>a</sup>	3	152.910	1.373	.263
Intercept	220729.688	1	220729.688	1982.636	.000
ICT	42.188	1	42.188	.379	.541
LEARNING_STYLES	391.021	1	391.021	3.512	.048
ICT * LEARNING_STYLES	25.521	1	25.521	.229	.634
Error	4898.583	44	111.331		
Total	226087.000	48			
Corrected Total	5357.312	47			

Table 2 shows that it analyses three categories: the use of blog and facebook, learning styles, and the correlation between ICT and learning styles. The first category is the use of blog and facebook; the p-value is  $0.541 > 0.05$ . It means there is no significant difference of writing achievement between the two kinds of media: blog and facebook. For the second category, learning styles, the result showed that the p-value is  $0.048 < 0.05$ . It means there is significant difference of writing achievement between two learning styles: introvert and extrovert students. For the last category, the interaction between the use of ICT and learning styles, the p-value is  $0.634 > 0.05$ . It means there is no significant interaction between the use of ICT and learning styles.

Table 3: MEDIA \* LEARNING\_STYLES AND WRITING SCORE

Dependent Variable:WRITING TEST

MEDIA	LEARNING_STYLES	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
FACEBOOK	INTROVERT	65.167	3.046	59.028	71.305
	EXTROVERT	72.333	3.046	66.195	78.472
BLOG	INTROVERT	64.750	3.046	58.611	70.889
	EXTROVERT	69.000	3.046	62.861	75.139

Table 3 shows that students' learning style was the only category that showed a significant difference among the three hypotheses. Moreover, from the two learning styles, the extrovert was the type of learning style which had better score in the writing test.

## 5. CONCLUSION

After the research data had achieved, the writer drew the conclusion. It is clear that there were not significant difference interaction between the use of blog and facebook with students' writing achievement. However, there was significant difference between two students' learning styles: introvert and extrovert students. As a result, the extrovert students performed better than introvert students.

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