Grammarly and Web-based Language Learning (WBLL) in Teaching Basic Grammar

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Article Info	Abstract
	The monotonous teaching techniques lead to boredom and lack of results in teaching basic grammar. Meanwhile, technology has rapidly developed. Furthermore, different personalities, extrovert and introvert, might affect the specific result in learning a language. Therefore, this study aimed to report the effectiveness of Grammarly and Web-based language learning (WBLL) techniques in teaching basic grammar to extrovert and introvert students. It employed quantitative research with a factorial design study. The object was the first grade of Nursing and Midwifery students of Ministry of Health Polytechnic Semarang in the Academic Year of 2020/2021. It involved two experimental groups. The students in Class A were treated using Grammarly technique, and students in Class B were treated using WBLL technique. The data collection used an EPI questionnaire and pre-test and post-test. At the same time, the data analysis employed ANOVA. The result showed that Grammarly technique was more effective in teaching basic grammar to extrovert students, and WBLL technique more effective in teaching basic grammar to introvert students. The result also showed a significant value of 0.804 > 0.05. It proved that there was no significant interaction of Grammarly, Web-based language learning, and the students' personalities in teaching basic grammar.

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INTRODUCTION

Regardless of the advanced development of technology, the common practice in teaching grammar is using classroom teaching techniques. It is crucial to address how e-learning platforms techniques affect language teaching, especially in teaching basic grammar.

One teaching technique is by using Grammarly in teaching grammar. Grammarly is the free-online proofreading website to check user writing for grammar errors, potential stylistic mistakes, and other features of interest (Karyuatry et al., 2018). It automatically identifies writing errors, such as grammatical errors, word choice, spelling errors, and punctuation errors (Fitriani, 2020; Ghufron & Rosyida, 2018). It helps students to improve their grammar skills and promote autonomous learning (Hartono, 2017).

Another technique in teaching grammar that needs to be considered is Web-based language learning (WBLL). This technique enables teachers to experience abundant teaching materials, which are very rich in topics, explanations, exercises, and interactions (Simatupang & Galingging, 2013; Yusof & Saadon, 2012). It can provide language learners with authentic materials and information and brings the target language world into the learning experience (Hamamorad, 2016). Furthermore, this technique supports the shift from a traditional teacher-centered classroom to a learner-centered environment (Arteaga & Rodas, 2018; Indah, 2015; Pacheco, 2005).

In addition, another factor that should be taken into account in the teaching and learning process is students' personality. Several studies are conducted on how students' personality affects the result of English language learning. The studies focus on personalities such as extrovert and introvert because they significantly contrast (Hsain & Suliman, 2015). It is believed that an extrovert is more superior in language learning than an introvert. However, it is also believed that introvert is more successful in language learning as far as the systematic study is concerned.

However, the common studies focused on the use of Grammarly in improving students' writing skills, whether this study focuses on the use of Grammarly in teaching basic grammar. Therefore, this study is new and different from previous studies. Furthermore, not only Grammarly, but this study also compares with WBLL as techniques in teaching basic grammar.

Build upon the explanation above, this study aims to implement Grammarly and WBLL in teaching basic grammar to university students. Besides, this research has a moderator variable which is extrovert and introvert personalities. The researcher formulates the statements of the problem as follows: (1) How effective is Grammarly in teaching basic grammar to extrovert students? (2) How effective is Grammarly in teaching basic grammar to introvert students? (3) How effective is WBLL in teaching basic grammar to extrovert students? (4) How effective is WBLL in teaching basic grammar to introvert students? (5) How significant is the interaction of Grammarly, WBLL, and the students' personalities (extrovert and introvert) in teaching basic grammar?

METHOD

This study is an experimental research with a factorial design 2 x 2 by multifactor analysis of variance (ANOVA) (Cohen et al., 2007, p. 280). This study was designed to investigate the correlation of Grammarly technique and WBLL technique, and students' personalities (extrovert and introvert) in teaching basic grammar.

This study was conducted at Ministry of Health Polytechnic Semarang Kendal Class. The population was 60 first grade students of Nursing and Midwifery in the academic year of 2020/2021. There were two experimental groups. Class A was treated using Grammarly and Class B using WBLL. The tryout of the test instrument was also conducted twice in Class C and Class D. Furthermore, due to the COVID-19 pandemic, the treatment was conducted online using several e-learning platforms.

The data were collected using questionnaires and tests. The EPI questionnaire was used to determent students' personality, extrovert and introvert. The tests were tryout, pre-test, and post-test. The test instrument was 40 questions in multiple-choice formats about basic grammar.

After that, the data were analyzed using a t-test and ANOVA.

RESULTS AND DISCUSSIONS

Before conducting the study, two test instrument tryouts were conducted. The data obtained from the tryout was analyzed to determine the validity and reliability of the instrument. It was conducted twice in two classes, Class C and Class D. Each class consisted of 26 students. The students did a total of 48 multiple choice questions about basic grammar in 60 minutes. The result showed that 40 questions could be used as the test instrument in the pre-test and post-test.

In order to determine students' personality, this study used Eysenck Personality Inventory (EPI) questionnaire. The questionnaire items of statements were in English and Indonesian to make the students well understand. Total students with extrovert and introvert personalities in both experimental groups' presented in Table 1.

Table 1. Extrovert and Introvert Students in Experimental Groups

Personalities	Class A	Class B
Extrovert	13	16
Introvert	17	14
Total	30	30

After conducting the pre-test and post-test, the results were measured by ANOVA (Analysis of Variance). The next step was to conduct the requisite test to determine whether the parametric statistical analysis could be administered. A requisite test is used to measure the normality and homogeneity of the data. The normality test is used to find out whether the data are normally distributed or not. Meanwhile, the homogeneity test is used to find out whether the data are homogenous or not.

Pre-analysis and hypothesis testing were conducted in order to answer the research questions. The statistical calculation of the hypothesis test was measured by using SPSS. A paired sample test was used to answer research questions number 1 to 4. Meanwhile, a two-way ANOVA was used to answer research question number 5.

Teaching Basic Grammar Using Grammarly to Extrovert Students

The analysis was to answer the first research question of this study about how effective Grammarly is in teaching basic grammar to extrovert students. It used a paired sample test. The following Table 2 provides the first hypothesis test result.

Table 2. Paired Sample T-test of Class A with Extrovert Students

Paired Samples Test

		Paired Differences							Significance	
					95% Confidence Interval of the Difference					
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	One-Sided p	Two-Sided p
Pair 1	Pre/ Post-test	-12.385	11.207	3.108	-19.157	-5.612	-3.985	12	<.001	.002

The results showed that extrovert students taught using Grammarly in class A improved their basic grammar skills. There was no significant difference in pre-test and post-test results. The P-value was 0.002 < 0.05, and Ho was rejected. It meant that using Grammarly technique was effective in enhancing basic grammar skills of extrovert students.

Extrovert personality is someone's personality that is more sociable to others. They have many friends and want to be happy and like to go to parties. The people who have extrovert personalities are sensation-seekers and risk-takers.

They like jokes, are energetic, and are more active. Someone who is extraverted, he hypothesized, has excellent and potent inhibition (Eysenck, 1947). The results showed that Grammarly positively affects extrovert students because it provides many opportunities to explore their work. It was in line with Jung (1971), Al-Dujaily et al. (2013) (2013), and Hsain & Suliman (2015) that extrovert is open, sociable, and socially assertive, oriented toward other people and the external world. Thus, extrovert students enjoy exploring new technology in learning a language.

Teaching Basic Grammar Using Grammarly to Introvert Students

The analysis was to answer the second research question of this study about how effective Grammarly is in teaching basic grammar to introvert students. It used a paired sample test. The following Table 3 provides the second hypothesis test result.

Table 3. Paired Sample T-test of Class A with Introvert Students

Paired Samples Test

		Paired Differences								Significance	
					95% Confidence Interval of the Difference						
			Std.	Std. Error						One-	Two-
		Mean	Deviation	Mean	Lower	Upper	t	df		Sided p	Sided p
Pair 1	Pre/ Post-test	-3.412	14.807	3.591	-11.025	4.201	-.950	16		.178	.356

The results showed that introvert students taught using Grammarly in class A improved their basic grammar skills. There was no significant difference in pre-test and post-test results. The P-value was 0.356 > 0.05, and Ho was accepted. It meant that using Grammarly technique was not effective in enhancing basic grammar skills of introvert students.

As also stated by Jung (1971), introverts are withdrawn and often shy, focusing on themselves, thoughts, and feelings. They did not like being in a crowded situation because they needed to concentrate well. This finding is similar to the study conducted by Sanjaya (2015) and Zafar & Meenakshi (2012) that introvert students tend to work systematically rather than explore new technology in learning the language. It also seems that they needed total concentration because they were easily distracted, especially from the noise. Moreover, the students who had this personality preferred to learn individually and independently.

Teaching Basic Grammar Using WBLL to Extrovert Students

The analysis was to answer the third research question of this study about how effective WBLL is in teaching basic grammar to extrovert students. It used a paired sample test. The following Table 4 provides the second hypothesis test result.

Table 4. Paired Sample T-test of Class B with Extrovert Students

Paired Samples Test

		Paired Differences								Significance	
					95% Confidence Interval of the Difference						
			Std.	Std. Error						One-	Two-
		Mean	Deviation	Mean	Lower	Upper	t	df		Sided p	Sided p
Pair 1	Pre/ Post-test	-5.937	23.507	5.877	-18.464	6.589	-1.010	15		.164	.328

The results showed that extrovert students taught using WBLL in class B improved their basic grammar skills. There was no significant difference in pre-test and post-test results. The P-value was 0.3236 > 0.05, and Ha was rejected. Using WBLL technique was not effective in enhancing extrovert students' basic grammar skills.

The result did not support Karim (2011) and Simatupang & Galingging (2013) studies where WBLL is effective in improving students' achievement. However, the result is in line with Nam & Smith-Jackson in Nordin & Alias (2008) that WBLL provides a recent and wide range of teaching-learning experiences like accessing information at any time and place, online presentation of information, interactive task-based

activities, and long-distance education that is less feasible in traditional classrooms. It seems that extrovert students prefer to explore and develop their ideas rather than follow several instructions in reading the materials and doing exercises on the website provided.

Teaching Basic Grammar Using WBLL to Introvert Students

The analysis was to answer the fourth research question of this study about how effective WBLL is in teaching basic grammar to introvert students. It used a paired sample test. The following Table 5 provides the second hypothesis test result.

Table 5. Paired Sample T-test of Class B with Introvert Students

Paired Samples Test										
		Paired Differences								Significance
			Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				One- Sided p	Two- Sided p
		Mean			Lower	Upper	t	df		
Pair 1	Pre/ Post-test	-18.000	22.257	5.948	-30.851	-5.149	-3.026	13	.005	.010

The results showed that introvert students taught using WBLL in class B improved their basic grammar skills. There was no significant difference in pre-test and post-test results. The result proved that Ha was accepted, and the P-value was 0.01 < 0.05. It meant that using WBLL technique was effective in enhancing basic grammar skills of introvert students.

Supporting Alberth (2011), Bashori (2017), Kencana (2017), Oktavia et al. (2020), Purwati (2019), and Sari et al. (2021), Web-based language learning improves introvert students by benefitting low achieving learners with its multimedia effects in terms of building self-confidence, enhancing digital literacy, and engendering learners' positive

attitudes and perceptions on the integration of computers in foreign language learning. It was hoped that WBLL could be implemented in teaching and learning, especially to introverted students and teachers.

The Interaction of Techniques, Students' Personalities, and Basic Grammar Skills

This analysis was to answer the fifth research question of this study. In order to measure the interaction of techniques, students' personalities, and basic grammar skills, a two-way ANOVA test was used to analyze the result. The following Table 6 provides the hypothesis test result.

Table 6. Test of Interaction of ANOVA Tests of Between-Subjects Effects
Dependent Variable: Pre/ Post Test

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2747.006a	3	915.669	5.493	.001
Intercept	539019.875	1	539019.875	3233.646	<.001
PrePost	2655.631	1	2655.631	15.931	<.001
ExtInt	67.075	1	67.075	.402	.527
PrePost * ExtInt	10.298	1	10.298	.062	.804
Error	19336.160	116	166.691		
Total	562104.000	120			
Corrected Total	22083.167	119			

a. R Squared = .124 (Adjusted R Squared = .102)

From the calculation, the significant value was 0.804 > 0.05, and Ha was rejected. It meant that there was no interaction of Grammarly and WBLL techniques, students' personalities, and basic grammar skills. It might be because the treatment was conducted online using several e-learning platforms, and the researcher could not thoroughly observe the steps during the treatments. However, the finding of this research indicates Grammarly technique was more effective to teach extrovert students, while WBLL was effective to teach introvert students.

This finding is in line with the other studies conducted by Al-Dujaily et al. (2013), Hsain & Suliman (2015), Sanjaya (2015), and Zafar & Meenakshi (2012). The studies reported that there was a significant correlation between extrovert and introvert and their basic grammar skill. It is believed that an extrovert is more superior in language learning than an introvert. However, it is also believed that introvert is more successful in language learning as far as the systematic study is concerned. Since students' personality was not permanent or changeable, personality is too complex and changeable in a different situation and with different people.

CONCLUSION

From the results, this research has proven that both Grammarly technique and WBLL techniques can help and improve the students' basic grammar skills for both students with extrovert and introvert personalities. However, there are some weaknesses in both techniques. It can be seen that Grammarly technique is more effective than WBLL technique to extrovert students, while WBLL technique is more effective to introvert students than Grammarly technique. Thus, the Grammarly technique effectively implements extrovert personality because students enjoy exploring new technology and expressing their ideas. On the other hand, WBLL technique is easily implemented with introvert personality because they prefer to learn systematically and thoughtfully.

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