

Language Proficiency and Plagiarism Practices among Graduate Students

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Abstract

The English language has been the medium of instruction in most universities and colleges in the world that is common and mostly used to threaten the integrity of the scientific literature and academic community due to plagiarism despite available detection applications. This study aims to determine the Language proficiency and Plagiarism Practices of Graduate Students under Education Program and Non-Education Program and be able to correlate the language proficiency and plagiarism practices. The graduate students from two programs were the sources of data for this study. Pivot Analysis and Correlation matrix process were used to determine the linear correlation of English proficiency scores and plagiarism percentage that was visualized using a Scatter Diagram with Loess Regression Interpolation. The result of the study shows that Education graduate students have higher scores in English Proficiency scores than Non-education graduate students. It also shows that non-graduate students tend to practice more plagiarism compared to the education of graduate students. Linear correlation also shows that there is a strong positive correlation of plagiarism practices among students. It is recommended that universities should be strict in the implementation of plagiarism detection to maintain academic integrity.

Keywords: English, research competencies, English proficiency

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Introduction and Background of the Study

The English language is an international language that is used in teaching and learning especially in most Graduate Education programs. It has been the medium of instruction in most universities and colleges in the world. Language proficiency is very much important to achieve high academic performance (Orlanda-Ventayen, 2019), thus, most students should possess these skills to learn. English is also the most plagiarized language that is common and threatens the integrity of the scientific literature and academic community (J. R. Higgins et al., 2016). Maintaining academic integrity for educators might be a challenge despite plagiarism detection software available in the market such as Grammarly and other software use to check plagiarism of student work (Ventayen & Orlanda-Ventayen, 2018). The challenges for the service provider are also visible due to some has limited indexing that may not be able to detect other text outside of the range. Turnitin is known as the best plagiarism detection software available in the market, it was used by most institutions such as the Pangasinan State University to fight plagiarism (Batane, 2010; Turnitin, 2017). While Turnitin might be the best among the rest, the cost of the subscription may not be afforded by some small institution.

There has been an increasing practice of plagiarism in the academic community and it has been classified as a multi-layer phenomenon of dishonesty that occurs in higher education. In the academic community, some papers indexed in PubMed have been retracted for many reasons including fraud or error that includes plagiarism, scientific mistake and ethical problems (Eret & Ok, 2014; Steen, 2011). Plagiarism is dangerous, which could lead to wrong information and wrong application. Academic papers and web pages are increasing, and it is very difficult to compare documents with all available data on the internet that even the best plagiarism detection application may face these challenges. It is important to maintain academic integrity, especially for educators and managers, because they are the center of education and commerce in the world. In this study, graduate students are examined to determine plagiarism practices and English proficiency skills. This study also compares the two different programs.

The Objective of the Study

The main objective of the study is to correlate language proficiency and plagiarism practices among Graduate Students, with the following specific objectives:

1. To be able to determine the Language proficiency of Graduate Students under:
 - a. Education Program
 - b. Non-Education Program
2. To be able to determine the Plagiarism Practices of Graduate Students under:
 - a. Education Program
 - b. Non-Education Program
3. To be able to correlate the language proficiency and plagiarism practices of the graduate students under
 - a. Education program
 - b. Non-education program.

Significance of the Study

The significance of the study is to determine if there is a direct correlation of language proficiency and plagiarism practices which may be able to provide intervention based on the result of the study, the study is also an eye-opener to the graduate students and schools in order to provide intervention to avoid plagiarism.

Definition of Terms

Education Graduate Students – Students of one State University in the Philippines who are taking up Master of Arts in Education.

English Language Proficiency – Consist of an examination that measures grammar, vocabulary, and reading comprehension.

Non-Education Graduate Students - Students of State University in the Philippines who are taking up Master in Development Management.

Plagiarism Practices – The practices of graduate students in plagiarizing examination without reminders.

Programs – It is a degree program offered by the institution. MAEd and MDM are the programs offered by one State University in the Philippines.

Methodology***Research Design***

A descriptive correlational research design was utilized by the researcher, which is primarily interested in describing relationships among variables as this research study will investigate the correlation between English proficiency and plagiarism practices among graduate students of one State University in the Philippines. Document analysis and Examination are the main methodology of the study, where the result of the report of the plagiarism detection software and the result of the examination will be investigated. An informal follow-up interview was utilized in order to validate the result and acquire insights from the respondents.

Sources of Data and Processing

The graduate students of one State University in the Philippines taking up Education-related master's degree and non-education master's degree for the SY 2019-2020 were the sources of data for this study. All of the students are invited to participate in an English Proficiency Examination that which was 100 multiple choice that is divided into 3 categories which are grammar, vocabulary, and reading comprehension. At the orientation, the students are not notified that essay work will undergo plagiarism testing.

The researcher administers a midterm and final examination in the form of essay writing with five questions with approximately 1500 words for each student without reminding the students that the paper will undergo plagiarism detection. A purposive sample used that is selected based on the characteristics of a population and the objective of the study.

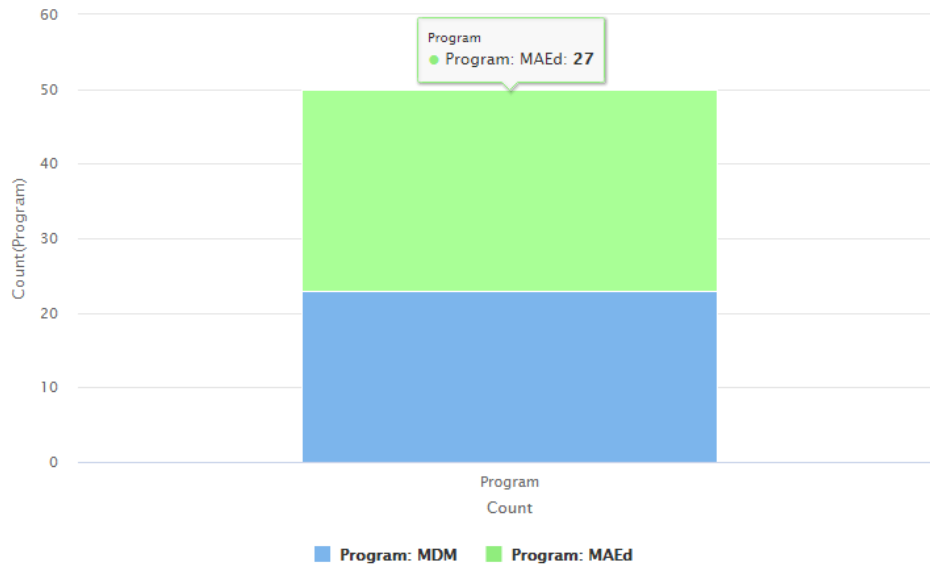


Figure 1 Distribution of Respondents

As shown in Figure 1, there are 27 Master of Arts in Education students who are labeled as Education Graduate Students, and 23 Master in Development Management who are labeled as non-education graduate students.

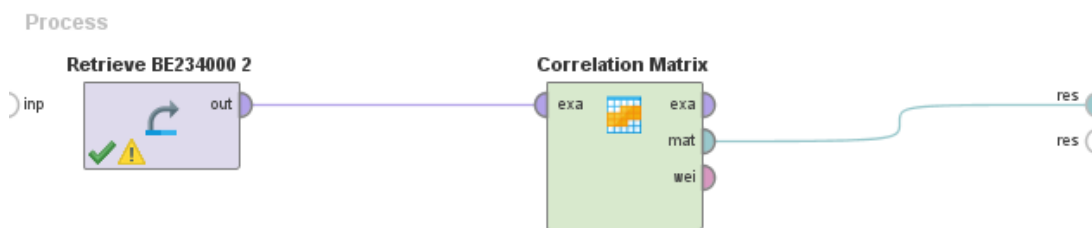


Figure 2 shows the RapidMiner Process Design

As shown in Table 2, the data was imported in the RapidMiner design process to simplify the analysis of data and to generate the result.

Statistical Treatment Used

In order to simplify statistical computation, all data was imported using RapidMiner. A Correlation matrix process (Naik & Samant, 2016; RapidMiner, 2019) was used to determine the linear correlation of English proficiency scores and plagiarism percentage. To interpreted the linear relationship, a range of strengths was adopted as shown in Table 1.

Table 1 Table of Interpretation for Strength of the Linear Relationship

Correlation	Strength of the linear relationship
1	Perfect
0.8 to 1.0	Very strong
0.60 – 0.80	Strong
0.40 – 0.60	Moderate
0.20 – 0.40	Weak
0.00 – 0.20	None to extremely weak

Scatter Diagram with Loess Regression Interpolation was generated in the RapidMiner Statistical Visualization to visualize the scores and percentage. Lastly, Pivot Analysis was also used to determine the average, minimum and maximum value of scores and percentage.

Results and Discussion

Language proficiency is the ability to use the English language in spontaneous interaction and non-rehearsed context. The language competency of the students was measured based on the examination conducted which contains grammar, vocabulary, and reading comprehension. The manner of speaking the English language that is acceptable and appropriate to native speakers is one of the challenges for Filipinos (Kirkpatrick, 2012; Sicam & Lucas, 2016).

Aside from the difficulties in English, this study aims to determine the correlation between proficiency and plagiarism practices. An award-winning plagiarism software Turnitin was used to determine the plagiarism practices of the education graduate and non-education graduate students.

Language Proficiency of Graduate Students

Table 2 shows the average percentage of English proficiency in Education and non-education students. The result shows that education students have higher results in all examinations which consist of grammar, vocabulary, and reading comprehension.

Table 2 shows the Average English Proficiency

Program	Grammar P average	Vocabulary P average	Reading Comprehension P average
MDM	0.741	0.751	0.690
MAEd	0.893	0.886	0.819

Table 3 shows the minimum percentage of English proficiency in Education and non-education students. The result shows that education students have higher results in all examinations which consist of grammar, vocabulary and reading comprehension.

Table 3 shows the Minimum English Proficiency

Program	Grammar P minimum	Vocabulary P minimum	Reading Comprehension P minimum
MDM	0.456	0.533	0.333
MAEd	0.622	0.633	0.300

Table 4 shows the total combined percentage of all the results of the English proficiency examination. The result shows that graduate education students have a higher total score compared to the non-education master's students. This implies that teachers have higher English proficiency than non-teaching workers because the medium of instruction that the teachers are using is English in the classroom. English proficiency of teachers is also mandatory from job application to practice (Nel & Müller, 2010; Van Canh & Renandya, 2017).

Based on the informal interview with the non-education graduate students, the medium of communication in the workplace is Filipino or the local language. English is not widely used in the office and only applies in the form of business communication and memorandum. Studies suggest that workers practicing English as a lingua franca may improve communication skills in and outside the workplace (Al-khatib, 2005; C. Higgins, 2018; Lam et al., 2014).

Table 4 shows the Total Combined Percentage

Program	Total Score's Percentage average
MDM	0.732
MAEd	0.877

The scatter diagram consistently shows that education graduate students have higher score results than the non-education graduate students. Loess regression is a nonparametric technique that uses locally weighted regression to fit a smooth curve through points in a scatter plot. Loess curves reveal trends and cycles in the data of education and non-education graduate students. This implies that education students have higher English proficiency than non-education graduate students.

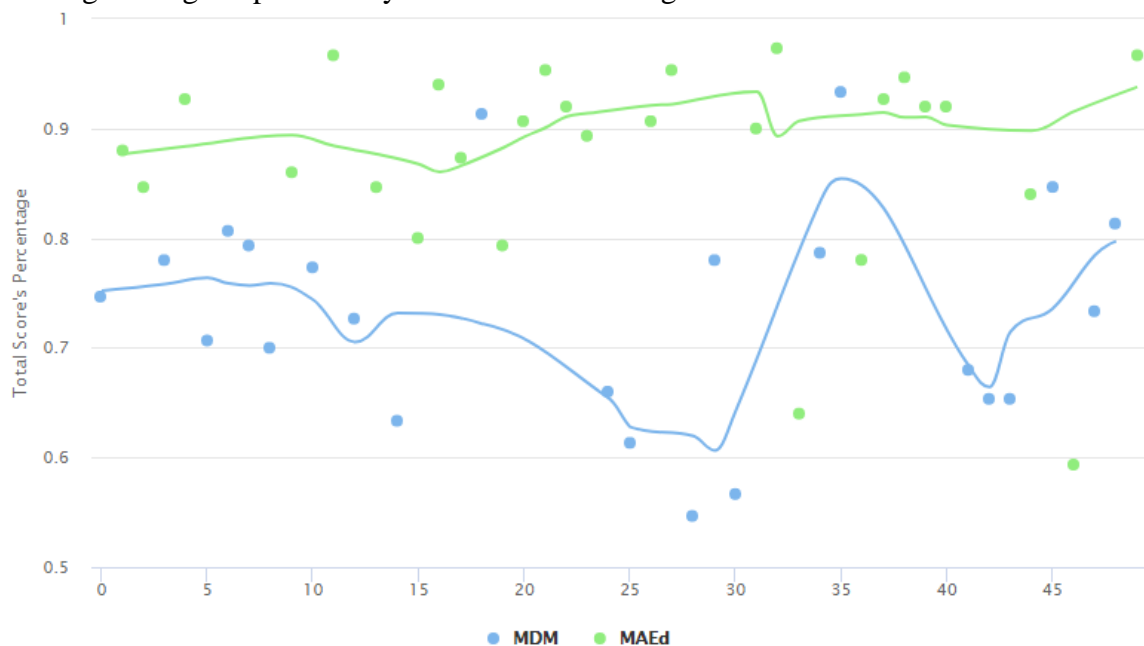


Figure 3 Scatter Diagram showing Loess Regression Interpolation of Total Score's Percentage

3.2 Plagiarism Practices of Graduate Students

Table 5 shows the average percentage of plagiarism practices of Education and non-education students. The result shows that education students have lower plagiarism results in all assignments submitted.

Table 5 Average Percentage on Plagiarism Practices of Graduate Students

Program	Assignment 1 <i>average</i>	Assignment 2 <i>average</i>
MDM	0.434	0.439
MAEd	0.249	0.204

Table 5 shows the maximum percentage of plagiarism practices of Education and non-education students. The result shows that education students have lower plagiarism results in all assignments submitted.

Table 6 Maximum Percentage on Plagiarism Practices of Graduate Students

Program	Assignment 1 <i>maximum</i>	Assignment 2 <i>maximum</i>
MDM	0.750	0.820
MAEd	0.620	0.500

The scatter diagram does not consistently show that education graduate students have a lower result of plagiarism results than the non-education graduate students despite the average shows that education students have lower plagiarism results. Loess regression shows a curve through points in a scatter plot that there is an overlap between courses and different assignments. This implies that both education and non-education students do not have consistency in practicing plagiarism.

Educators are implementers of academic integrity where they aim to maintain a high level of standard in the academic community. Due to the increasing technological advantage in education (Apas & Ventayen, 2019), the easy access to the Web, and other means of communication, has turned plagiarism into a serious problem for publishers, researchers and educational institutions (Maurer et al., 2006). Not all institutions may be able to subscribe to a high-priced plagiarism software, or some may be able to choose a low-cost plagiarism detector but with a low detection rate without access to closed accessed resources. Researchers suggest Turnitin as the plagiarism software that should be used in order to maintain the academic integrity (Bruton & Childers, 2016; Buckley & Cowap, 2013; Johari et al., 2015; Patel et al., 2011; Walker, 2010).

While the result of the study shows that the plagiarism practices of graduate students in non-education programs have a higher rate. The industry should also improve its awareness in relation to plagiarism in any form as a serious offense where integrity and loyalty in work must be treated with utmost importance.

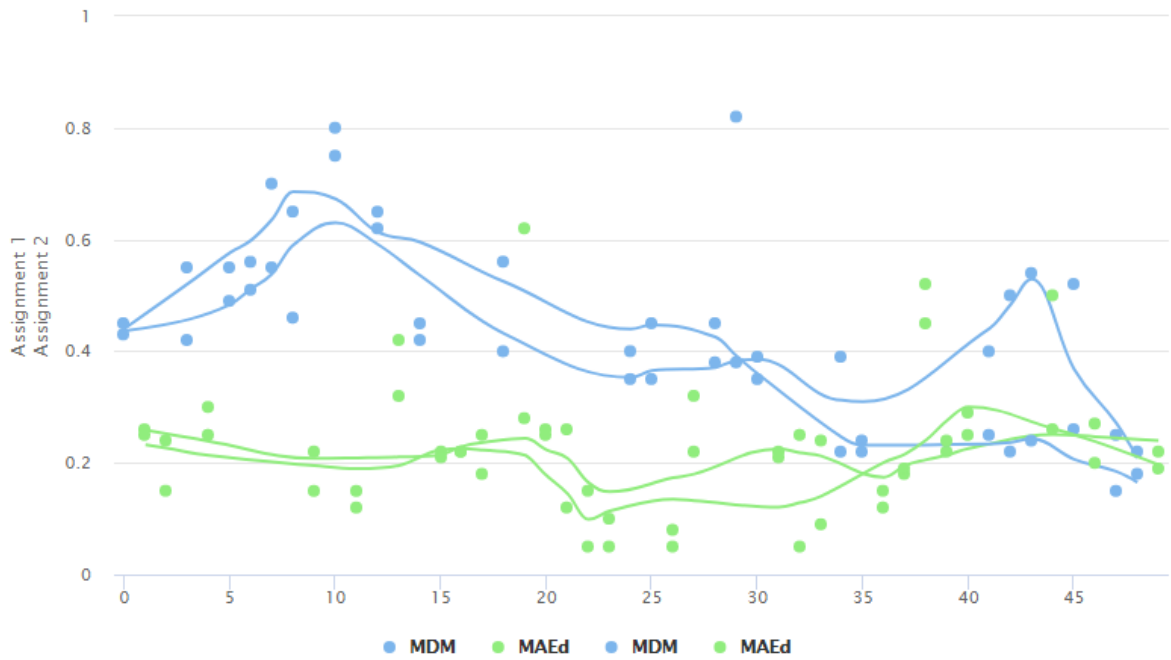


Figure 4 Scatter Diagram showing Loess Regression Interpolation of Assignments

Table 7 shows the correlation matrix for education students, it was shown that there is a weak positive correlation between reading comprehension and plagiarism practices. This implies that if the student has a higher score in reading comprehension, a plagiarism practice also increases. A weak positive correlation shows that there is a slight effect of reading comprehension to plagiarism practice.

There is a moderate positive correlation between the plagiarism practices for the first and second assignments. This implies if the student practice plagiarism on the first assignment, there is a possibility that the practice will be repeated.

Table 7 Correlation Matrix for Education Students

Attribut...	Gramm...	Vocabul...	Reading...	Total Sc...	Assign...	Assign...
Gramma...	1	0.335	0.499	0.887	-0.189	-0.090
Vocabul...	0.335	1	0.407	0.605	-0.070	-0.077
Reading ...	0.499	0.407	1	0.796	0.056	0.211
Total Sc...	0.887	0.605	0.796	1	-0.110	0.010
Assignm...	-0.189	-0.070	0.056	-0.110	1	0.597
Assignm...	-0.090	-0.077	0.211	0.010	0.597	1

Table 8 shows the correlation matrix for non-education students, it was shown that there is a weak positive correlation between reading comprehension and plagiarism practices. This implies that if the student has a higher score in reading comprehension, a plagiarism practice also increases. A weak positive correlation shows that there is a slight effect of reading comprehension to plagiarism practice.

There is a strong moderate positive correlation between the plagiarism practices for the first and second assignments. This implies if the student practice plagiarism on the first assignment, there is a possibility that the practice will be repeated.

Table 8 Correlation Matrix for Non-Education Students

Attribut...	Gramm...	Vocabul...	Reading...	Total Sc...	Assign...	Assign...
Gramma...	1	0.424	0.004	0.821	-0.063	-0.126
Vocabul...	0.424	1	0.424	0.726	-0.044	0.011
Reading ...	0.004	0.424	1	0.543	-0.015	0.390
Total Sc...	0.821	0.726	0.543	1	-0.062	0.083
Assignm...	-0.063	-0.044	-0.015	-0.062	1	0.545
Assignm...	-0.126	0.011	0.390	0.083	0.545	1

Table 9 shows the correlation matrix for both education and non-education students, it was shown that there is a weak positive correction between reading comprehension and plagiarism practices. This implies that reading comprehension may have a contribution to the plagiarism practice of the students.

There is a strong positive correlation between the plagiarism practices for the first and second assignments. This implies if the student practice plagiarism on the first assignment, there is a possibility that the practice will be repeated for both programs.

Table 9 Correlation Matrix for both Education and Non-Education Graduate Students

Attribut...	Assign...	Assign...	Gramm...	Reading...	Total Sc...	Vocabul...
Assignm...	1	0.715	-0.439	-0.177	-0.428	-0.357
Assignm...	0.715	1	-0.428	0.056	-0.333	-0.328
Gramma...	-0.439	-0.428	1	0.351	0.902	0.568
Reading ...	-0.177	0.056	0.351	1	0.688	0.499
Total Sc...	-0.428	-0.333	0.902	0.688	1	0.767
Vocabul...	-0.357	-0.328	0.568	0.499	0.767	1

A negative moderate correlation is visible between Grammar and vocabulary across the assignments, this means that as the knowledge in grammar and vocabulary increases, the lesser the student will practice plagiarism.

The result of the study agrees with other related studies, where plagiarism is more frequent among lower performers (Jereb et al., 2018). Other studies suggest that gender has a factor with plagiarism practices (McCabe et al., 2001). Lack of knowledge about the penalty, process, and awareness also contributes to the practice (Eret & Gokmenoglu, 2010; Šprajc et al., 2017).

Limitation of the Study

While there is a visible difference between the two programs, this study is limited in nature. In order to validate and conclude the strong correlation of program across the plagiarism practices, expansion of the study should be conducted. English proficiency in grammar and vocabulary was found out to be a contributory factor in order for the student to minimize its plagiarism practice, but the practice such as paraphrasing and other methods of detection was not used in this study. Only one institution was subjected to testing and convenient purposive sampling was used in the selection of the population of this study. It is recommended that a wider scope of respondents should be conducted in future studies.

Conclusion and Recommendation

The study concluded that graduate education students have a higher total score compared to the non-education master's students. This also concludes that teachers have higher English proficiency than non-teaching workers because the medium of instruction that the teachers are using is English in the classroom. This paper also concludes that education graduate students have a lower result of plagiarism results than the non-education graduate students but both education and non-education students do not have consistency in practicing plagiarism.

It is recommended that the graduate students should be aware in the first place to avoid the practice. The institution must include an orientation to the students regarding the use of the plagiarism detection software in order to avoid the practice. Sanction and penalties should be imposed by the institution and clear guidelines should be implemented to maintain academic integrity.

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