Spelling Proficiency of Good and Poor Spellers among CPC Students

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ABSTRACT

This study explores the spelling ability of two speller groups: Good Spellers and Poor Spellers in two tasks: the Spelling Production and Recognition Tasks. The study employed Fischer et al.'s Spelling Recognition Task where the orthographic transparency of words was varied over three levels. The study was conducted at Mindanao State University–Main Campus, involving 40 CPC students—20 identified as good spellers and 20 poor spellers—categorized based on their Diagnostic Test scores. Reliability was ensured through subsequent interviews. Results indicate that good spellers surpassed grade-level expectations in the diagnostic test, whereas poor spellers exhibited deficiencies. Good spellers obtained a passing remark in the production task, with all poor spellers failing to meet the required standards. In the recognition task, proficient spellers demonstrated fair to satisfactory performance, while poor spellers achieved a passing grade. A comparative analysis revealed that CPC students performed better in the Spelling Recognition Task. Statistical analysis confirmed significant differences between respondents' scores in the diagnostic test and the production task, diagnostic test, and recognition task, as well as between production task and recognition task scores.

Keywords: **English Orthography, Transparency, Good Speller, Poor Speller, Proficiency**

I. INTRODUCTION

The English language is considered to have a deep alphabetic representation. It uses a set of rules that govern how speech is represented in writing. When writing, many people spell words in the same manner as they are pronounced. This strategy of spelling relies heavily on phonemes and works well in other orthographies but leads to spelling errors in English. This research contributes to understanding spelling abilities among CPC students and underscores the nuanced distinctions between production and recognition aspects of spelling proficiency.

Spelling or orthography is a neurologically demanding sub-skill of writing, involving a range of linguistic skills. In English orthography, as well as other alphabetic writing systems, most letters and letter sequences correspond to phonemes (i.e. the smallest meaningful units of speech sounds). However, some words are not spelled according to letter-sound correspondence rules. The 26 letters of the alphabet do not map neatly onto the approximately 40 phonemes. Frequently, a grapheme (i.e. letter to letter cluster) corresponds to more than one phoneme (i.e. sound or sound cluster), and a phoneme corresponds to more than one grapheme. Sometimes letters in words correspond to no speech (i.e., they are not pronounced) because of the words' morphological nature, historical derivation, or contextual constraints (Wade, 2007).

According to the studies of Kamhi and Hinton (2000) and Scott (2000), there are good and poor spellers. Researchers have noted characteristics common to good spellers as opposed to poor spellers. Good spellers operated under the assumption that the English system of spelling had regularity and that spelling problems could be solved. On the other hand, poor spellers were more likely to view spelling as something completely arbitrary and beyond their control. Poor spellers demonstrated limited strategies for word solving which relied heavily on sound. In contrast, successful spellers knew and used a variety of strategies when solving spelling problems. They were able to combine knowledge of all levels of orthography: sound, visual, and meaning. Proficient spellers also appeared to access an extensive store of words and word-specific knowledge from memory while it takes poor spellers longer to learn.

Indeed, as will become apparent, spelling is to a large extent a creative process of symbolizing the linguistic structure of spoken words (Baroussa & Treiman, 2000). Spelling difficulty is not a general

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"visual memory" problem. It is a specific problem with awareness of (and memory for) language structure, including the letters in words. Joshi, Treiman, Carreker, and Moats (2009) mentioned that the more deeply and thoroughly a student knows a word, the more likely they are to recognize it, spell it, define it, and use it appropriately in speech and writing. These claims were also supported by Lanir (2011) who implied that spelling proficiency requires the acquisition of phonological knowledge, morphological awareness, and orthographic rules. For an English language user, proficiency in spelling is a must. Teachers should include written words as part of vocabulary instruction and students should pronounce spellings as well as determine meanings when they encounter new vocabulary words. Students need to have formal instruction on the English writing system to develop such skills because accordingly, students' spelling errors reflect their levels of literacy.

This research explored the spelling proficiency of good and poor spelling groups of the College Preparatory Course of the Pre-University Center, MSU-Main Campus as they were believed to have better performance in English in comparison with their counterparts. Tasks were administered to test their performance level. Studies done by Fischer, Shankweiler, and Liberman, (1985); Mandi (2013); Boras (2003); Bancha (2013); Al-zuoud (2013); and Chavez et al. (2013) were used as references. The purpose of conducting this study was to identify whether the tasks that were administered significantly affected students' spelling performance. Specifically, it sought to answer the following questions: a) What is the performance of the respondents in the Diagnostic Test? b) What is the performance of the good and poor spellers in the Production and Recognition Task? and C) What is the significant difference between the respondents' scores in both the Diagnostic Test and Production Task; and between the Diagnostic Test and Recognition Task? The findings of this research are believed to be beneficial and would contribute to addressing the issues regarding the spelling performance of students.

II. METHODS AND MATERIALS

Research Design

The researchers used a quantitative research design to evaluate the spelling ability of the good and poor CPC spellers. Quantitative research designs tend to be more fixed and deductive, with variables and hypotheses clearly defined in advance of data collection. By using the respondents' scores, the researchers answered the questions regarding the proficiency of each CPC student and analyzed the results with the help of a statistician.

Locale and Respondents of the Study

The study was conducted at Mindanao State University – Main Campus. The target respondents of the study were the College Preparatory Course (CPC) students in the university. With the help of the researchers' adviser and the department head, the researchers were able to administer the test. Using the results from the Diagnostic Test, the researchers were able to select 40 respondents (20 good spellers and 20 poor spellers) out of 53 students from two sections.

Instrumentation

The researchers utilized the Experimental Spelling Test used by Fischer et al. (1985) to test the respondents' spelling proficiency. The orthographic transparency of words in this test was classified into three levels. Words high in orthographic transparency (herein termed high) have a phonetic realization that is close to the orthographic representation and typically contain common English spelling patterns (e.g., update, diplomat). Words at the second, medium, level have a problem segment whose spelling requires knowledge of orthographic conventions (orthographic; e.g., changeable, strapped) or abstract morphophonemic information, such as principles of prefix attachment (morphophonemic; e.g., aggravate, commemorate). Words at the third level (herein low or opaque) are orthographically opaque, tend to be related to more obscure borrowed forms, and have less frequent spelling patterns (e.g., onomatopoeia, indebted). Researchers like Ehri and Rosenthal (2007) and Burt and Long (2011), used this test since it measures the content and competencies it ought to test. The Experimental Spelling Test captures structural properties that gave rise to different levels of transparency in English spelling.

Data Gathering Procedures

The study utilized several instruments to gather data. The instruments were prepared and validated before the application of the study. Upon approval, the researchers proceeded to the actual administration of the test. The administration observed the following procedures:

1. Diagnostic Test

Since the students were frequently given activi-

ties that involved writing and reading, the researchers conducted a 20-minute Diagnostic Test on the first day before the application of the Experimental Spelling Test of Fischer et al. (1985). They used and selected 15 words from the Schonell Spelling Test B of Schonell Fred J. (1932). This diagnostic test was administered to select the 40 study respondents.

2. Experimental Spelling Test

This instrument compared the performance of the CPC students who differ in spelling proficiency on spelling tasks that incorporate graded changes in orthographic transparency, the subjects were tested for 1 hour during which the following tasks were administered.

Spelling Production Task. The subjects' task was to print each dictated word in the space provided and to attempt every word. Each word was repeated twice and once for the definition.

Spelling Recognition task. The same items were presented again, this time as a multiple-choice recognition test.

After the administration of the tests, the researchers computed the errors and analyzed and evaluated the performance of the CPC students on these three tasks of the Experimental Spelling Test.

Scoring of Spelling Errors

The following error categories were used to analyze the misspellings:

1. Word Errors were scored for each misspelled word without regard to the number of misspelled segments (for example when "sergeant" was spelled "sargent").

2. Segment Errors were scored for every incorrect spelling pattern, as defined by guidelines established by Hanna, Hodges, and Rudorf (1966). Segment errors were further classified as substitutions, omissions, or insertions.

a. Segment Errors were scored when an incorrect grapheme was used in place of the correct letters. These were further classified as "phonetic substitutions" when the word spelled captured the word's approximate phonetic shape (as when hemorrhage was spelled as "hemorreage") and "non-phonetic substitutions" (for example, when indebted was spelled "indepted").

b. Omission Errors were scored when a grapheme needed for the orthographic representation of a phonological segment was omitted (for example, when the word clannish was spelled as "clanish").

c. Insertion Errors were scored when an additional grapheme was included (for example, tongue for "toungue").

Data Analysis Procedures

The researchers used descriptive statistics and hypothesis testing for paired observations in analyzing the data gathered from the students through the spelling tests which were presented in dictated and recognition tasks. Aside from that, the other relevant supplementary information gathered such as the one-on-one interview with the English instructor and selected students were interpreted qualitatively and descriptively.

III. RESULTS AND DISCUSSION

Table 1 - Performance of the CPC students in the Diagnostic Test

Transmuted Scores	Interpretation	*f*	%	Mean	SD	Qualitative Rating
71 & below	Failed	32	60.4			
75-80	Passing	15	28.3			
81-86	Fair/ Satisfactory	3	5.7	72.60	8.42	Failed
87-92	Good	2	3.8			
93-97	Very Good	1	1.9			
98-100	Excellent	0	0.0			
Total		53	100.0 %			

Table 1 shows the performance of the students coming from the two sections in the given diagnostic test. As seen in this table, the majority of the respondents obtained a transmuted score of 74 and below which constitutes 60.4% of the total respondents. This means that 60.4% of them obtained a failed mark. Then, 28.3% of the respondents obtained a transmuted score that falls within the interval 75 to 80 which is marked as passing, 5.7% of them obtained a score within 81 to 86 which is marked as fair/satisfactory, 3.8% of them obtained a score within 87 to 92 which is marked as good, and there are 1.9% of them who obtained a score within 93 to 97 which is marked as very good. Moreover, the mean score of the respondents is 72.60 with a standard deviation of 8.42. Based on this, it can be concluded that on average, the respondents

failed the diagnostic test.

In an interview with the CPC instructor, he said "Spelling is a demanding task. It is demanding because you need to a) memorize the alphabet and b) be able to use the language, but that's the problem. We cannot avoid sometimes, although we know the ABCD..., but when it comes to spelling difficult words or even simple words, it is hard to spell." In this study, there are individual differences in spelling abilities among CPC students. According to Fischer et al. (1985), spelling proficiency depends on an individual's ability to understand the appropriate language and writing system. The result implies that individual differences in spelling ability are primarily caused by differences in the knowledge and use of sound-spelling information. Good spellers tend to use a variety of strategies when solving spelling problems while poor spellers demonstrate limited strategies for word solving which rely heavily on sound (Kernaghan, 2007).

Using Table 1, the respondents were classified as "Good spellers" and "Poor spellers" based on their transmuted scores as seen in Table 2:

Table 2 - Classification of the Respondents

Score	*f*	%	Classification
74 and below	32	60.4	Poor Spellers
75-100	21	30.6	Good Spellers
Total	**53**	**100.0%**	

From Table 2, only the 20 students with the highest scores and the other 20 with the lowest scores were selected as members of the sample. This yielded a total of 40 respondents.

Respondents' Performance on the Production Test

Good spellers obtained a passing remark on the production task (mean score: 77.01; std. deviation: 4.72). One hundred percent of the poor spellers failed the production test. The mean score is 67.28 and the standard deviation is 2.44. This indicates that somehow, good spellers already know the words given and how to apply spelling rules on tenses, roots, and affixes while poor spellers don't. Aside from having a poor vocabulary and not applying basic spelling rules of the English language, the poor spellers also failed to apply the connectionist theory in which if a speller can pronounce and spell daughter, they can use that to spell slaughter.

To summarize the result of the performance of the Good and Poor Spellers, the researchers constructed a chart to show the result of Figure 1.

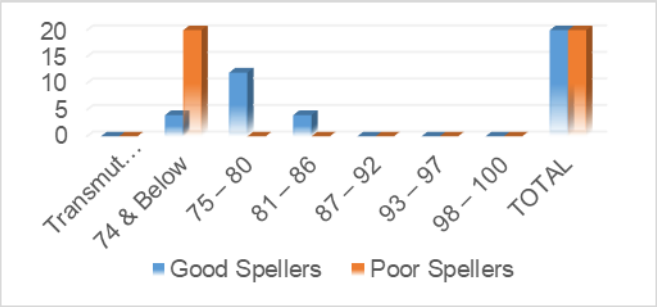

Figure 1 - Respondents' Performance on the Production Test

Respondents' Performance on the Recognition Test

In contrast to dictation, the Spelling Recognition Task (Multiple Choice) was implemented to measure the CPC students' capacity to store information in their memory and at the same time retrieve it when needed; that is how the dual-route theory works. It should be noted that the same words in the Production task were used in this task.

To summarize the result of the performance of the Good and Poor Spellers on the said test, the researchers constructed a chart to show the result (Figure 2).

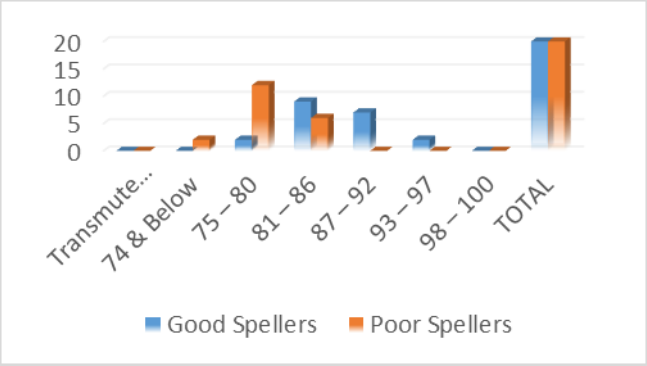

Figure 2 - Respondents' Performance on the Recognition Test

The overall result on the performance of the Good and Poor spellers in the recognition task implies that both spelling groups' performance has increased. Good spellers obtained a fair/satisfactory remark while poor spellers have a passing remark. Both spelling groups stored and retrieved information that was essential for spelling. This implies that spelling is more accurate on recognition tasks and thus supports the idea of Kamhi and Hinton (2000) that visual strategies are helpful in spelling. Moreover, both spelling

groups' scores were high for high and medium-frequency words and moderately high for low-frequency words.

Significant Difference between the Respondents' Scores in the Diagnostic Test and Production Task (note that the null hypotheses were tested at a 0.05 level of significance)

For Good Spellers: Since the value of the test statistic is which is greater than , then the decision is to reject the null hypothesis and thus say that there is a significant difference between the good spellers' scores in the diagnostic test and the production task. Although the diagnostic test and production test were all dictated, not having the same words and levels used affected the results of the tests given.

For Poor Spellers: Since the value of the test statistic is which is less than , then the decision is to reject the null hypothesis . That is, just like what was concluded from the test results of good spellers, there is also a significant difference between the poor spellers' scores in the diagnostic test and the production task.

Significant Difference between the Respondents' Scores in the Diagnostic Test and Recognition Task

For Good Spellers: Since the value of the test statistic is which is greater than , then the decision is to reject the null hypothesis and thus say that there is a significant difference between the good spellers' scores in the diagnostic test and the recognition task. Although the diagnostic test was dictated and the recognition test was given as multiple choice, just like the result on the production task, not having the same words and levels used affected the results of the tests given.

For Poor Spellers: Since the value of the test statistic is which is less than , then the decision is to reject the null hypothesis . That is, just like what was concluded from the test results of good spellers, there is also a significant difference between the poor spellers' scores in the diagnostic test and the recognition task.

Significant Difference between the Respondents' Scores in the Production Task and the Recognition Task

For Good Spellers: Since the value of the test statistic is which is less than, then the decision is to reject the null hypothesis. Therefore, it can be concluded that there is a significant difference between the good spellers' scores in the production task and the recognition task.

Good spellers' performance on the production task marked a passing score (77.01 Mean and 4.72 SD) but a fair/satisfactory remark (86.09 Mean and 3.79 SD) on the recognition task. This implies that the spelling ability of the good spellers was more accurate on the recognition task than on the production task. Thus, the result confirms the idea of Wade (2007) that in the task of recognizing, spelling proved to be significantly easier for the two groups than on the spelling production task which requires both groups to print each dictated word.

For Poor Spellers: Since the value of the test statistic is which is less than , then the decision is to reject the null hypothesis . Hence, proving a significant difference between the poor spellers' scores in the production task and the recognition task. It was the lack of adequate awareness of phonology found by the researchers to be the prime cause of their mistakes.

IV. CONCLUSION AND RECOMMENDATIONS

Spelling is not a process of memorization, but it is a highly complex intellectual accomplishment that one develops over time in conjunction with an individual's experience with and growing knowledge of the properties and uses of spoken and written language. Current spelling research suggests, as well as this study, that educators need to be aware of the developmental stages of students' spelling ability.

Accordingly, spelling difficulty is not a general "visual memory" problem. It is a specific problem with awareness of (and memory for) language structure, including the letters in words. Those considered successful spellers knew and used a variety of strategies when solving spelling problems. They were able to combine knowledge of all levels of orthography: sound, visual, and meaning. Proficient spellers also appeared to access an extensive store of words and word-specific knowledge from memory.

As Fischer et al. (1985) suggested, spelling proficiency depends on an individual's ability to understand the appropriate language and writing system. Each individual differs and these differences in spelling ability are primarily caused by differences in the knowledge and use of sound-spelling information rather than differences in some nonlinguistic factor. The findings of this study, therefore, suggest that the CPC students differ greatly in their ability to transcribe words. Those identified as Good Spellers performed better on the Experimental Spelling Test than the Poor Spellers. However, both performed better on

the Recognition than on the Production task, thus, suggesting that CPC students have limited phonological knowledge which is one of the requirements of being a proficient speller. Based on the findings, the researchers proposed the following recommendations:

1. Schools may provide training sessions and seminars, which should include lessons about the importance of correct spelling.
2. Curriculum designers may develop courses where spelling should be given better attention to enhance the students' proficiency in English.
3. English teachers can provide activities that will help enrich students' spelling abilities. More writing, reading, and listening activities will effectively enhance their spelling skills.
4. Students should willingly expose themselves more to different reading materials for them to have a wider vocabulary. The more the students read, the wider their vocabulary will be, and the better spellers and writers they will become.
5. Students should establish self-will in checking the spelling, meaning, origin, and pronunciation of newly encountered words. If necessary, students should listen to audiotapes for spelling and pronunciation to better increase competence.
6. As a child's first teacher, parents should motivate and encourage their children to establish competence in spelling, because this, in turn, will help them become effective spellers and writers.
7. Future researchers can incorporate a reading analysis in the study to compare the level of reading proficiency of students and then examine how this relates to spelling proficiency. In addition, if this study is replicated, it will be more interesting to investigate the sensitivity of each student to linguistic structures and the different strategies used by poor and good spellers in spelling words.

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