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**The Effect of the Cover, Copy and Compare Strategy on the Ninth
Graders' Acquisition and Retention of Spelling and their
Attitudes Towards the Strategy**

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صدق الله العظيم

"Nun. By the pen and by the (record)which men write."





نتيجة الحكم على أطروحة ماجستير

بناءً على موافقة عمادة الدراسات العليا بالجامعة الإسلامية بغزة على تشكيل لجنة الحكم على أطروحة الباحث/ تيسير يوسف خليل مسموح لنيل درجة الماجستير في كلية التربية/ قسم مناهج وطرق تدريس - اللغة الإنجليزية وموضوعها:

The Effect of the Cover, Copy and Compare Strategy on the Ninth Graders' Acquisition and Retention of Spelling and their Attitudes Towards the Strategy

وبعد المناقشة العلنية التي تمت اليوم الأحد 29 محرم 1433هـ، الموافق 2011/12/25م الساعة العاشرة صباحاً بمبنى القدس، اجتمعت لجنة الحكم على الأطروحة والمكونة من:

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وبعد المداولة أوصت اللجنة بمنح الباحث درجة الماجستير في كلية التربية/قسم مناهج وطرق تدريس - اللغة الإنجليزية.

واللجنة إذ تمنحه هذه الدرجة فإنها توصيه بتقوى الله ولزوم طاعته وأن يسخر علمه في خدمة دينه ووطنه. والله ولي التوفيق،،،

عميد الدراسات العليا

د. فؤاد علي العاجز
أ.د. فؤاد علي العاجز

DEDICATION

To my parents from whom I acquired virtue and hard work

To my wife who tolerated a lot to let me continue my education

To my sons and daughters

To my brothers and sisters

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All praise and gratitude to Allah who donated me health, mental ability and energy to bring this work to light.

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Abstract

"The Effect of the Cover, Copy and Compare Strategy on the Ninth Graders' Acquisition and Retention of Spelling and their Attitudes Towards the Strategy"

This study investigated the effect of using CCC strategy for teaching spelling on the ninth graders' acquisition of spelling. It also examined the long-term effect of the strategy on the retention of the correct spelling. Furthermore, the students' attitudes towards the strategy was investigated.

The sample of the study consisted of (60) nine grade male students divided into two groups; an experimental group and a control group. Both groups have (30)students each. The groups were purposively chosen from Deir El Balah Prep. "B" Boys' School that is an UNRWA school located in the Middle Governorate in the Gaza Strip. The two groups were equivalent in their previous learning, achievement in English language in general and achievement in spelling in particular.

The study attempted the experimental approach where there were two groups of ninth graders; an experimental group and a control one. To investigate the effect of using CCC strategy on ninth graders' acquisition and retention of spelling, CCC strategy was used in teaching the students of the experimental group while the traditional method was used with the control group students.

To collect data and achieve the goal of the study, the researcher used two tools, pre -post and retention test to measure the effectiveness of CCC strategy and a social validity questionnaire to assess the students' attitudes towards the strategy.

The results of this study confirmed the effectiveness of CCC strategy. The findings revealed that there were significant differences between the mean scores attained by the experimental group and those by the control group in the post-test and retention test in favor of the experimental group. The results of the social validity questionnaire indicated that almost all students (96.22 %) showed satisfaction with CCC strategy, enjoyed using it, and felt like they were better spellers after having used the strategy. They also indicated that they thought the strategy was easy to use and that they would use it in the future when learning spelling.

ملخص البحث

"اثر طريقة النسخ والتغطية والمقارنة على اكتساب واستبقاء الهجاء لدى طلاب الصف التاسع واتجاهاتهم

نحو هذه الطريقة "

تهدف هذه الدراسة إلى التعرف على تأثير استخدام طريقة النسخ و التغطية والمقارنة على اكتساب واستبقاء الهجاء لدى طلاب الصف التاسع واتجاهاتهم نحو هذه الطريقة.

اختار الباحث عينة الدراسة بطريقة قصدية من مدرسة ذكور دير البلح الإعدادية "ب" حيث يعمل الباحث معلماً فيها. اشتملت العينة على 60 طالباً من طلاب الصف التاسع الأساسي. قسمت العينة بشكل متساو إلى مجموعتين: ضابطة و تجريبية.

استخدم الباحث المنهج التجريبي في هذه الدراسة. كما واستخدم أداتين لجمع المعلومات اللازمة للدراسة، **أولاً:** اختبار تحصيلي في مهارة الهجاء والذي استخدم كاختبار قبلي وبعدي وتتبعي. **ثانياً:** إستبانة لقياس اتجاهات الطلاب نحو الطريقة.

نفذ الباحث اختبار الهجاء القبلي لضبط متغيرات التحصيل والتعلم السابق. ولقد أثبتت نتائج الاختبار القبلي أن العينتين متكافئتين ولا توجد فروق بينهما.

استخدم الباحث طريقة النسخ والتغطية و المقارنة في تدريس الهجاء لطلاب المجموعة التجريبية بينما استخدمت الطريقة التقليدية مع طلاب المجموعة الضابطة.

تم تحليل النتائج إحصائياً لمقارنة نتائج الاختبار القبلي والبعدي والتتبعي وكذلك نتائج الاستبانة. ولقد بينت النتائج أن هناك فروق ذات دلالة إحصائية بين المجموعة الضابطة والمجموعة التجريبية في نتائج الاختبار البعدي والاختبار التتبعي لصالح المجموعة التجريبية و يعزى ذلك إلى استخدام طريقة النسخ والتغطية والمقارنة. كما و بينت نتائج الاستبانة رضا و قبول غالبية طلاب المجموعة التجريبية عن الطريقة ، وشعورهم بأنهم أصبحوا أفضل في مهارة الهجاء وأنهم سوف يستخدمون هذه الطريقة في المستقبل عند تعلمهم الهجاء.

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List of Abbreviation

1	SPSS	Statistical Package for Social Science
2	CCC	Cover, Copy and Compare
3	UNRWA	United Nations Relief and Works Agency

Chapter I

Introduction

Chapter I

Problem Statement and Background

1. Introduction

English language occupies a distinctive position as an international language of commerce, industry, politics and education to the extent that it has become an agreed-upon fact in the academic world of today. So it is important to be able to express oneself properly and to communicate with other people in English, not only orally, but in writing as well (Solati et. al 2008:1).

In today's world where everyone is considered a member of the global village, English has long been regarded as one of the most popular languages for people speaking different mother tongues to communicate with one another. English learning thus appears to be a hot trend in many countries where English is not the official language (Chung 2006:132). Almost throughout the world, English has become a necessity and a dominating language. The ability to communicate in English is the aim of a lot of people nowadays (Almugren 2009:1).

Writing is one of the English language four skills. It is the process of putting thoughts and ideas into words in a meaningful form. It is a crucial skill in the process of learning any language. It is an ongoing process that continues from early childhood to university and beyond as Applebee (1984) indicates

Learning to write is a complex and ongoing process. It begins early, with a child's first scribbles on the nearest table or wall, and continues (at least for the academically inclined) through the dissertation and beyond. For most of us, writing remains a difficult process, avoided at some length, and enjoyed most (if at all) only in the completion (p.1).

Islam shows great concern for writing where Allah says in Surah Al Qalam, verse 1 “Nun. By the Pen and by the (record) which men write. In Surah Al-Alaq, Allah, the Most High describes Himself as "He, who has taught (the writing) by the pen". He has taught the man that which he knew not” (4,5). These verses indicate the importance of the pen which is the tool of writing and through which knowledge is attained.

In another indication of the importance of writing in Islam, Prophet Mohammed (peace and blessing be upon him) says that, "The first thing that Allah created was the pen". (Al Albani1982: 286).

Also, after the battle of Badr, the first battle against Quraysh, the Muslim Army took seventy prisoners. Prophet Muhammad (peace and blessing be upon him) knew that most of the prisoners were literate and he offered freedom to those who taught ten Muslims to read and write.

One important skill to take into account when discussing writing is spelling. Dehham & Mohmmmed (2008 :3) define spelling as "The formation of words by using letters. It is the ability to write words correctly depending on the memory". Al-Saedi (1989:17) also defines spelling as "putting the elements (letters) of each word in the right sequence".

Correct spelling as Nasir(1963) cited in Dehham & Mohmmmed (2008:4) is just as important in writing as correct pronunciation is in speaking. Laminack et. al (1996:10) argue that spelling, although a small piece of the writing process, is of great concern to teachers, parents, and the general public.

Spelling is a necessity for effective writing. Simon(2004:5) illustrates that learning to spell is necessary because: 1) Words are the tool of the writer and they must be accurate. 2) Accurate spelling enables writers to fluently express messages that are easily read and

understood by others. 3) Accurate spelling is part of the overall process of learning language. Expanding knowledge about words impacts the whole scheme of printed language.

The ability to spell words easily and accurately is an important part of being a good writer (Treiman 1993:3). A person who must stop and puzzle over the spelling of each word, even if that person is aided by a computerized spelling checker, has little attention left to devote to other aspects of writing. In fact, to participate fully in today's information - based society, students need to develop effective writing skills. Generally, this requires accurate spelling (Morton 1996:1).

Spelling is also an essential element for effective communication between the writer and the reader. In order to communicate effectively, a person needs to develop the ability to spell quickly and accurately the words he uses in his everyday writing (Beverly 2010:3). "Correct spelling makes written communication easier while misspelling might lead to interruption of communication and misunderstanding "(Al- Khaffaji & Al-Shayib 1987:7).

Moreover, spelling has a direct link not only to writing but also to reading as well. The correlation between spelling and reading skills has been acknowledged by many researchers.

Success in reading depends on mastering the system of English spelling. Learning to read well and to spell efficiently are complementary activities-success or difficulty in both go hand in hand. Studies of the relationship between spelling and reading consistently show that the two are significantly related (Leo 1971:6). When students become better spellers they are able to read more efficiently and effectively (Culpepper2010:25).

Besides its effects on communication, writing and reading, spelling affects the overall academic success. Spelling affects academic performance and grades since individuals with low

spelling confidence and skills not only write less and more plainly, but may simply not be empowered to adequately express their knowledge in various subject areas (Warda 2005:2). "Students who exhibit weaknesses in spelling are more likely to perform lower with regard to academics in general than their peers without weaknesses in spelling" (Cates 2007:71). Because of the role it plays in developing literacy and composition skills, spelling is critical to overall academic achievement (Gentry et. al 2010:8).

Furthermore, spelling is a valued skill in the societies all over the world. How well one spells demonstrates his level of literacy, his intelligence, and the effectiveness of the educational system. The frequent spelling errors made by a writer influences the reader's acceptance of the message and his view of the writer. The writer also may be perceived as careless or uneducated if there are too many spelling errors in his writing.

Westwood (2008:2) points out that public interest in spelling standards remains very strong. Naturally, spelling is a topic that attracts interest among the general public. It is often that the standard of an individual's spelling is some indication of his or her intelligence, ability and level of education. Employers expect their employees to be able to spell if their job calls for communication in writing. The standard of an applicant's spelling is one factor that could influence any decision made by a selection panel. Even writing letters and emails for friends can be a source of embarrassment if they contain spelling errors. Parents present one group with very strong views about spelling. They expect schools to regard accurate spelling as important, and to develop the children's spelling proficiency. Those who fail to develop spelling skills are often judged negatively by their peers, business associates, employers, and even themselves.

Spelling is one of the most difficult areas in English language. Native and non native learners have difficulties in learning how to spell English words. The main reason that makes

English spelling such a difficult skill to acquire is that there is no direct relationship between sounds and letters in English. There are forty-four sounds and only twenty-six letters to represent them. That means knowing the pronunciation of a word does not enable one to predict its spelling with confidence .In fact, English words very often do not look like they sound.

English is not a phonetic language, it is not written as it is spoken nor does it have closer phoneme-grapheme correspondence. Therefore, spelling difficulties are expected to rise for students learning English as a foreign language (Hasan 2000:3). English spelling is in no doubt a complicated matter in which many interrelated skills are involved and learners around the world have trouble getting the letters right (Solati et. al 2008:1).

Although spelling is important and difficult to acquire at the same time, it does not receive enough attention and sometimes is completely ignored at school programs.

Whereas the majority of student's mistakes in written English are to do with spelling, spelling has been almost completely ignored in teaching methodology and in course-books (Al-Othman 2003:23). Although the subject area of spelling and learning to spell has been researched and analyzed from various perspectives it is a part of the curriculum that has been neglected in many classrooms (Nies & Belfiore 2006: 163).

Gentry (1987) argues that

Too much that is known about how to teach spelling isn't being put into practice. I can think of no subject we teach more poorly or harbor more myths about than spelling. In spite of volumes of research, teachers still use the same unsubstantiated teaching formulas (p.7).

Spelling is a curriculum area in which teachers employ many of the same strategies and methods from 20 to 30 years ago. As literacy development advances and new research promotes

new reading and writing strategies for teachers, spelling methods are often left behind and neglected. Students are not learning to spell effectively and traditional methods are not providing adequate support for students. The traditional methods to teaching spelling-memorize this list and take a test at the end of the week- isn't effective for many students (Davis 2011:3).

While many researched spelling strategies have proven to improve spelling scores, teachers are often not aware of the most effective spelling strategies and employ spelling theories that are outdated (Apel & Masterson 2001:2). Although some spelling programs may have updated their spelling approaches and include practices based on current research on spelling instruction, many teachers tend to rely on traditional spelling approaches or ways they were taught to spell to teach their students (Stetson 1982:5). Many probable causes for students' inability to transfer spelling into written work may lay within the spelling instruction that students receive (Dubois et. al 2007:20).

Spelling continues to be an important literacy skill needed for writing and reading development and more attention needs to be given to spelling instruction, strategies, and teaching methods (Davis 2011:6). Children with spelling difficulties can achieve spelling success if properly instructed. They can become automatic and efficient spellers if appropriate methodology is used along with a carefully planned curriculum. Appropriate methodology are essential if to prevent academic failure for children with language difficulties. There are children who are at risk for written language failure if they do not receive specific instruction in the area of spelling (Edmands 2000:16). They will not grow into successful spellers as they progress through many more years of education (Jones 2006:54).

Based on the data cited above and based on the researcher's own experience in teaching, spelling is often left behind and neglected. The traditional approach for teaching spelling, which

is widely used in classrooms today, is ineffective. So, it is the English teachers' responsibility to try new methods and strategies, especially those that have been proved to be effective. One of these methods is Cover, Copy and Compare(CCC).

Cover, Copy, and Compare (CCC) is a simple, efficient and self-managed academic intervention that can be used to improve accuracy, fluency, and maintenance across students, curricula objectives, academic skill domains, and settings. In its most basic form, CCC involves just three few steps. First, the student looks at an academic stimulus (written word). Second, the student covers the academic stimulus and then makes an academic response (write the word). Third, the student then uncovers the stimulus item and evaluates her or his last academic response by comparing it to the stimulus item. If the student determines that the last response was accurate, the student moves to the next stimulus item and repeats CCC procedure. If the student determines that the response was incorrect, the student performs an error correction procedure (repeats CCC procedure or engages in positive practice) before moving to the next stimulus item (Skinner et. al 1997: 295, 296).

The strategy provides students with multiple practice opportunities and immediate performance feedback with self-correction. Furthermore, it has been shown to be more effective than other commonly used instructional practices. The strategy provides discrete learning trials for students, and can be individualized (Moser2009:11).

In a climate of growing educational accountability and expectations for use of scientifically-based instructional techniques, it is important for researchers to continue building upon prior knowledge of effective intervention strategies and to extend lines of research where there are missing links (Kosmac2009:19).

This study was built on the already extensive research based on the use of CCC procedures as a method for teaching spelling. The researcher conducted this study to investigate the effect of using CCC strategy on the students' acquisition and retention of spelling as it has been shown to be effective at increasing students' spelling accuracy.

2. Statement of the Problem

The English orthography has only twenty-six letters that can be used for representing forty-four phonemes. Thus, since there is no direct relationship between sounds and letters, English words very often do not look like what they sound. Therefore, English spelling is a very problematic area because knowing the pronunciation of a word does not enable one to predict its spelling. The same letter may be pronounced differently in different words.

Even with the vast amount of spelling textbooks and other material aids available, many teachers are implementing approaches that rely heavily on memorization for spelling tests.

The typical way teachers implement spelling in the classroom is through an approach that follows closely with a spelling textbook or series (Jones2006:3). Many teachers teach spelling by writing words on flashcards and exposing students to them many times or by having students write words 5 to 10 times. However, the effectiveness of such methods is not well established (Joshi et. al 2009:7).

Hence, it is the responsibility of all English teachers to try new methods and strategies and to choose the most effective in teaching spelling.

The main focus of this study is to try CCC strategy in teaching spelling since, as it was mentioned earlier in the study, has been shown to be effective at increasing students' spelling accuracy.

3. Need for the Study

The researcher has been teaching English for 10 years. Over this time, it has become clear that many learners experience serious problems with English spelling. So, the researcher felt that it was of great importance to try new a strategy in teaching spelling in order to improve students' spelling skill.

The current study aimed at examining the effect of using CCC strategy on the ninth graders' spelling acquisition and retention at UNRWA schools in the Middle Governorate of the Gaza strip.

This study is distinctive because all the studies that examined the effectiveness of CCC strategy on teaching spelling were applied outside Palestine. The researcher also noticed that the spelling skill is the one that receives the least concern in the Arab studies, compared with other language skills, especially in Palestine. Due to this fact, the researcher believed that there was an urgent need for conducting this study.

4. Purpose of the Study

Previous studies in different parts of the world have shown that CCC strategy is an effective strategy in teaching spelling.

The current study aimed at examining the effect of using CCC strategy on the ninth graders' spelling acquisition and retention at UNRWA schools in the Middle Governorate of the Gaza strip. In addition, the students' attitudes towards CCC strategy was also investigated.

5. Research Questions

The study addressed the following major question:

•What is the effect of using CCC strategy on the ninth graders' acquisition and retention of spelling?

The following minor questions emanated from the above major one

1- Are there statistically significant differences at ($\alpha \leq 0,05$) in the total average score of the post-test between the experimental group and the control group?

2- Are there statistically significant differences at ($\alpha \leq 0.05$) in the total average score between the post-test and the retention test of the experimental group?

3- Are there statistically significant differences at ($\alpha \leq 0,05$) in the total average score of the retention test between the experimental group and the control group?

4 - What are the students' attitudes towards the CCC strategy ?

6. Significance of the Study

Four audiences could benefit from this study.

Students

Students might benefit from this study by being offered multiple approaches to spelling instruction. Literacy skills could also be enhanced and spelling frustration levels could be decreased.

English language teachers

Teachers that may instruct using traditional approaches might be open to trying new alternative approaches and realize the importance of spelling instruction. This study may also draw English teachers' attention to the effectiveness of CCC strategy in teaching spelling and may motivate them to try this strategy in their classrooms.

English language supervisors

This study may stimulate English language supervisors' interests in conducting training courses to promote English teachers to use CCC strategy in teaching spelling.

Syllabus designers

Syllabus designers may benefit from this study in enriching English language curriculum with various techniques and activities for teaching spelling.

7. Research Procedures

The following steps were followed:

1. review literature related to the topic of the study to get an idea of the most effective approaches used in teaching spelling,
2. design the tools of the study,
3. consult a number of experts and specialists to verify the validity and reliability of the tools,
4. take permission from UNRWA administration in Gaza to carry out this study,
5. apply experimental method in collecting and analyzing the data, and
- 6- offer suggestions and recommendations to the concerned people.

8. Definition of Terms

Spelling

"Spelling skill refers to the ability to form words by arranging letters in a proper order" (Larson et. al 1999:33). "It is the system which integrates phonetic and morphemic patterns to produce meaning in writing. It is a writer's ability to use standard or correct spelling" (NSW 1998 :10).

Spelling Accuracy

"Spelling accuracy is defined as writing the correct sequence of letters (the orthography of the letters) for the stimulus words. For the word is picture, the only spelling scored as correct would be : p-i-c-t-u-r-e. Any other variation is counted incorrect" (Morton 1996 : 16).

Cover, Copy and Compare (CCC)

"Cover, Copy, and Compare (CCC) is a simple, efficient and self-managed academic intervention that can be used to improve accuracy, fluency, and maintenance across students, curricula objectives, academic skill domains, and setting" (Skinner et. al 1997:295).

The three-step procedure of teaching spelling according to CCC strategy

- a. Student looks at an academic stimulus (written word).
- b. Student covers the academic stimulus and then makes an academic response (write the word).
- c. student then uncovers the stimulus item and evaluates her or his last academic response by comparing it to the stimulus item. If the student determines that the last response was accurate, the student moves to the next stimulus item and repeats CCC procedure. If the student determines that the response was incorrect, the student performs an error correction procedure (repeats the CCC procedure or engages in positive practice) before moving to the next stimulus item (Skinner et. al 1997:296).

Spelling Retention Test

Spelling retention test is defined as "The assessment measure used to determine the retention of the correct spelling of previous target words over a period of time" (Spaine 1999:32).

Social Validity

"Social validity is a term coined by behavior analysts to refer to the social importance and acceptability of treatment goals, procedures, and outcomes" (Foster& Mash 1999:1).

Orthography

"Orthography refers to "the rules that govern how words are represented in writing" (Carreker 2005:265).

Traditional Approach to Teaching Spelling

Marten and Graves (2003:35) state that, "A teacher with a traditional approach to teaching spelling sees value in a weekly routine of memorization, repeated drills, and spelling tests, as a way to remember spelling words".

In this study, the researcher adopted the definition of Marten and Graves.

9. Limitations of the Study

1. The study was limited to a sample of 60 male ninth graders from Deir- Al-Balah Prep. "B" Boys' School that is an UNRWA school located in the Middle Governorate in the Gaza Strip.
2. The study was applied in the second semester of the school year (2010 /2011).
3. The study was only limited to spelling skill in English language textbooks "*English for Palestine 9*" through applying CCC strategy in teaching the spelling of 42 words.

Chapter II

Literature Review

Chapter II (A)

Theoretical Framework

Introduction

The purpose of this chapter is to review the literature related to spelling instruction. It also highlights CCC as a new strategy for teaching spelling. It is divided into four main sections that lay out important information for the design and purpose of this study.

The first section begins with defining spelling. It also discusses the importance of spelling for communication, writing, reading, and academic success.

The second section presents the difficulty of English spelling and the problems that Arab learners face in this area.

The third section talks about spelling instruction in the classroom in the past and today. Moreover, it introduces the ongoing controversy of spelling instruction on the best way to teach spelling in the classroom.

The fourth section introduces major approaches to teaching spelling. It highlights CCC strategy and its effect on improving spelling skill. These four sections are followed by the researcher's comments on the literature.

1. Importance of Spelling

1.1 What is spelling?

Spelling is defined by several scholars and researchers. Among these definitions are the followings:

“Spelling is a process of converting oral language to visual form by placing graphic symbols on some writing surface. The ability involves more than memorizing the spelling of

individual words. Spelling ability is a developmental achievement gained through interaction over time with the orthography in both writing and reading "(Hodges 1984:1,2).

"Spelling is the ability to recognize, recall, reproduce, or obtain orally or in a written format the correct sequence of letter" (Simmons2007:18).

"Spelling is the ability to form words by placing the letters of the alphabet in accepted and accurate arrangements so other literate people can easily recognize those words in their printed forms"(Smith et. al 2001:7).

"Spelling is writing the word using the correct letters in the correct sequence" (Alber & Walshe 2004:56).

"Spelling is the knowledge of orthography, which is the system of symbols and rules used to represent spoken language in writing" (Willett & Gardiner 2009: 4).

"Spelling is the formation of words by using letters, orthographically; a combination of letters representing a word. It is also the ability to write words correctly depending on the memory" (Dehham & Mohmmmed 2008:3).

"Spelling is the system which integrates phonetic and morphemic patterns to produce meaning in writing. Also refers to a writer's ability to use standard or correct spelling" (NSW 1998:10).

"Spelling is putting the elements (letters) of each word in the right sequence" (Al-Saedi 1989:17).

Based on the above mentioned definitions, the researcher suggests the following definition :

Spelling is the ability to produce words, orally or in a written format, by placing the letters of these words in accurate sequence.

1.2 Why to Teach Spelling?

Spelling is an extremely important aspect of English language. Several researchers and specialists have attributed the importance of spelling to the following reasons:

1.2.1 Spelling is Important for Writing

Although spelling is one ingredient of writing, it is of great importance for writing process. Poor spellers exhaust time and energy thinking about the correct form of the words at the expense of the flow of thoughts and logic of texts. Poor spellers also tend to use words that they are confident of their spelling and avoid those that they are not. This resulted in composition of lower quality.

Okyere (1990) argues that

Spelling is an essential skill for students to master because it allows for the clear expression of thought in written form . It is one of the important tool skills in written communication and an essential component of a total language arts curriculum. Even though is usually not taken seriously compared to other academic activities such as reading and math, children who develop their spelling skill are free to concentrate on the clarity, logic and substances necessary for effective writing rather than on the mechanism of spelling (p.1).

The ability to spell words easily and accurately is an important part of being a good writer. A person who must stop and puzzle over the spelling of each word, even if that person is aided by a computerized spelling checker, has little attention left to devote to other aspects of writing (Treiman 1993:3). Good spelling supports speed and fluency in writing. When students struggle to spell a word, they must pause in the writing process, often causing them to lose their train of thought and become frustrated. Struggling with spelling also limits students' range of expression. As a result, many students will choose to use a much simpler word that they know how to spell rather than use a more sophisticated word that lives in their oral vocabulary but for which they are less sure of the spelling. Struggling with spelling can also lead to a self-fulfilling

prophecy in which students avoid writing, think of themselves as not being able to write, and fall further and further behind their peers (Gentry 2010:6).

"Learning to write well involves learning to spell. Writing creates the need for spelling. The value of correct spelling is that it gives writing credibility and therefore reaches a wider audience" (NEALS 1998:7). "The ability to spell is imperative because it allows the writer to express information accurately" (Zakiah 1996:2).

Spelling matters to writers because it is part of the process of making meaning through the written word. Competence in spelling releases the creativity of the writer. Young writers need to be so confident about their spelling that they can concentrate on composing ideas and making stylistic choices at word and sentence level that reflect the purpose and the context of their writing (National Strategies Secondary 2008:2). Proficient spellers have more time to devote to text structure, grammar and word choice, enabling their ideas, knowledge and skills to be conveyed through their writing (Literacy Secretariat 2010:1). Having available an automatic spelling vocabulary allows writers to express the full range of their thought with minimum impediment (Boylan1995:7).

Good spelling makes writing much easier-allowing the writer to focus on the ideas to be conveyed, not the letters needed to put those ideas on paper (Joshi et. al 2009:6). It allows the writer to put his thoughts on paper without frequent interruption to check on correct spelling, and allows the reader to read what is written. Incorrect spelling is readily noticed by the reader and can result in an unfavorable impression of the writer (Wirtz 1992:1).

Misspelled words can take away from the meaning of text and also convey unintended meanings of the writing at hand (Culpepper 2010:25). Written pieces also become shorter in length and details become fewer. Motivation to write also declines. The act of composing is also

slowed and the train of thought is altered when one cannot spell a word correctly (Baleghizadeh & Dargahi 2011:152).

Poor spellers who must think too hard about how to spell use up valuable cognitive resources needed for higher level aspects of composition. They restrict what they write to words they can spell, with inevitable loss of verbal power, or they may lose track of their thoughts when they get stuck trying to spell a word (Moats 2006:12). Those spending a lot of time and energy on spelling, or avoiding to use hard-to-spell words, can feel inhibited in their confidence to write (Literacy Secretariat 2010:1). They also experience frustration and resistance toward written expression activities (Alber & Walshe 2004:51). They are at a disadvantage for creating writing of any kind (Fay 2004:5).

Dehham et. al (2008:4) demonstrate that writing relies on putting ideas into a written form; that is, being able to spell and write. Writing and spelling must be automatic in order that the writer can concentrate on expressing his or her ideas. If learners are unable to develop automatic spelling and writing, they will find it extremely difficult to express themselves on paper. Poor spelling, in addition to causing the writer frustration and embarrassment, adversely affects composition and transmission of ideas. On the whole, students who spell poorly write fewer words and write compositions of lower quality. Writers who struggle to remember spelling often limit themselves to words they can spell, losing expressive power. Moreover, no automatic spelling drains attention needed for the conceptual challenges of planning, generating ideas, formulating sentences, and monitoring one's progress.

As teachers want their pupils to become fluent and effective writers; accurate spelling is a means to that end. Competent spellers need to spend less time and energy in thinking about spelling to enable them to channel their time and energy into the skills of composition, sentence structure and precise word choice (National Strategies Primary 2009:2).

1.2.2 Spelling is Important for Communication

People communicate with each other not only orally but also in written form. When communicating in writing, correct spelling plays an essential role in conveying the intended message effectively. On the other hand, incorrect spelling has a bad effect on the mutual understanding between the writer and the reader.

People learn languages to communicate with others. Communication can be in either spoken or written. For effective writing, a person who wants to communicate through writing should have adequate content and correct forms of English words. The use of correct spelling brings good communication between the writers and the readers whereas incorrect spelling brings communication breakdown between them. The readers who are reading wrongly spelt words may understand the word in a wrong way and he may be confused to understand the message of the writers. Therefore, knowing and using the correct spelling of words help to create good communication between writers and readers. It is important for a person to know how to spell English words. A person who does not know how to spell English words commits spelling errors that can cause communication breakdown (Miressa et. al 2011:103). "Incorrect spelling leads to misunderstanding and perhaps miscommunication on the part of the reader" (McNeish 1985:1).

Accurate spelling is standard equipment for functioning in daily life. In order to communicate effectively, a person needs to develop the ability to spell quickly and accurately the words he uses in his everyday writing (Beverly 2010:3). Accurate spelling contributes to an easy and effective exchange of ideas between the writer and the reader. It is integrally linked to clear written communication and it needs to be learned, needs to be taught (Smith et. al 2001:7). It helps writers to communicate across the boundaries of dialect and pronunciation (NEALS

1998:8) . Briefly, in order to communicate via the written words, it is necessary to be able to spell correctly (Boylan 1995:21).

1.2.3 Spelling is Important for Academic Success

Spelling plays an important role not only in writing but also in reading. The correlation between spelling and reading skills has been acknowledged by many researchers.

Reading and writing processes depend on the effective use of the same knowledge and strategy base. Writing development is therefore dependent on reading development (Newfoundland & Labrador 2010:24). Today, a catalog of research in education, psychology, and neurology-including brain-scanning studies -supports the central role that spelling plays in learning to read and write proficiently (Gentry 2010:2). Students' ease of spelling in early grades ensures later ease of reading and allows for faster comprehension (Simmons 2007:8). Good spellers are almost always good readers (Joshi et. al 2009:9). Children are better able to read words when they know how to spell them (Ehri 1987:11). Spelling contributes to reading fluency and reading comprehension (Literacy Secretariat 2010:3).

When students become better spellers they are able to read more efficiently and effectively. Because of the background of spelling they had, they are able to decode and sound out words that may cause trouble for them in reading (Culpepper 2010:25). People who cannot spell are likely to have problems with reading (Kotercová 2007:3). They early often begin to experience reading failure (Edmands 2000:16). "Skillful reading depends critically on the deep and thorough acquisition of spellings and spelling-sound relationships" (Adams 1990: 421).

Success in reading depends on mastering the system of English spelling. Learning to read well and to spell efficiently are complementary activities-success or difficulty in both go hand in hand. Studies of the relationship between spelling and reading consistently show that the two are

significantly related (Leo 1971:6). Not only are strong readers better spellers, but low spelling skills measurably hinder a students reading ability. Solid familiarity with the visual shapes of individual letters is an absolute prerequisite for learning to read (Warda 2005:2).

Knowledge of spelling-sound correspondences is a basic component of reading (El koumy 2004:40). It is the engine that drives efficient reading (Templeton 1999:103). It also helps to cement the connection between the letters and their sounds, and improves both reading and writing (Jones 2009:2).

Besides its effects on writing and reading, spelling is critical to overall academic success. Spelling abilities and performance influence the overall academic and literacy success of students (Fay 2004:6). Accurate spelling is part of the overall process of learning language and expanding knowledge about words impacts the whole scheme of printed language (Simon 2004:5). Being able to spell words is a prerequisite skill for academic success, especially in written communication as well as in reading (Carter et. al 2011:44). As spelling becomes automatic, students are freer to concentrate on the higher-level thinking and communication skills needed for success in school and life (Gentry 2010:2). Accurate spelling affects achievement and success in all curriculum areas (Smith et.al 2001:8).

Spelling deficits are not just limited to reading and writing, but can also prove to be a hindrance to other academic areas (Simmons 2007:8). Academic performance and grades will also be affected too, since individuals with low spelling confidence and skills not only write less and more plainly, but may simply not be empowered to adequately express their knowledge in various subject areas (Warda 2005:2). Students who exhibit weaknesses in spelling are more likely to perform lower with regard to academics in general than their peers without weaknesses in spelling (Cates 2006:71). Because of the role it plays in developing literacy and composition skills, spelling is critical to overall academic achievement (Gentry 2010:8).

1.2.4 Spelling is Important for Public

Spelling is a valued skill in the societies all over the world. It demonstrates the person's level of literacy and intelligence. Public perception of the importance of spelling has remained constant over the years. How well one spells demonstrates his level of literacy, his intelligence, and the effectiveness of the educational system. The frequent spelling errors made by a writer influences the reader's acceptance of the message and his view of the writer. The writer also may be perceived as careless or uneducated if there are too many spelling errors in his writing.

In this context, Westwood (2008:2) mentions that public interest in spelling standards remains very strong. Naturally, spelling is a topic that attracts interest among the general public. It is often that the standard of an individual's spelling is some indication of his or her intelligence, ability and level of education. Employers expect their employees to be able to spell if their job calls for communication in writing. The standard of an applicant's spelling is one factor that could influence any decision made by a selection panel. Even writing letters and emails for friends can be a source of embarrassment if they contain spelling errors. Parents present one group with very strong views about spelling. They expect schools to regard accurate spelling as important, and to develop the children's spelling proficiency. Those who fail to develop spelling skills are often judged negatively by their peers, business associates, employers, and even themselves.

The ability to spell is an integral part of the ability of people to communicate their ideas and to be taken seriously in today's society (Henjes 1999:1). Although no one spells perfectly all the time, educated public expects that formal communications be mostly error-free (Smith et. al 2001:10). In the society, individuals are required to possess proficient spelling skills in order to achieve success in their chosen profession. A lack of these skills often results in embarrassment and can adversely affect one's educational and professional growth (Spagnoli 2001:14). If a job

applicant's resume contains even one spelling error, it will seriously impede his or her chances of getting the job, even if spelling is not required for that job (Williams 2008:8). Poor spelling skills are also associated with limited intellectual ability in the society, and carry a negative stigma (Warda 2005:2).

The ability to spell has not diminished despite the ubiquitous use of computers and the Internet by many members of society. In fact, spelling skills (or lack thereof) are now more publicly exposed than ever before as people communicate widely through email, self-published websites and Web logs on the Internet (Young 2007:203).

2. English Spelling Difficulty

Introduction

It is well recognised that English is not an easy language to learn, particularly as a foreign language. One of the most difficult area in learning English is learning spelling.

Kotercová (2007:5) states that there is a perception that one of the possible reasons for illiteracy (alongside other reasons) could be an over-difficult spelling system since English spelling is undeniably one of the most difficult spelling systems to master, invariably causing much grief to many pupils which might then cause them to give up further learning.

Several researchers attribute the complexity of English spelling to the English alphabetic system and history of English language.

2.1 English Alphabetic System

The alphabet system assigns one letter to each phoneme in the language so that a spoken language could be written down and read by others. But it is not the case in English. The main reason that makes English spelling such a difficult skill to acquire is that there is no direct relationship between sounds and letters. There are forty-four sounds and only twenty-six letters

to represent them. That means knowing the pronunciation of a word does not enable one to predict its spelling with confidence . English words very often do not look like they sound.

There are about half a million words in the English language. Even though it uses 26 letters for about 44 sounds, many of its words are not spelt the way they sound (NEALS 1998:9). Spelling in English is irregular and difficult. This is because there is often more than one way of spelling a sound, and more than one way of pronouncing a letter (Meriem 2010:22).

It is easy to spell words in some languages, because you just write down the sounds that you hear. English spelling is harder, especially because the same sound can be written in different ways. When considering English in terms of its sound-to-spelling correspondences, it appears quite irregular. Other languages are more regular, in that each phoneme is represented by the same letter or letter group every time it occurs (Hayes et. al 2005:8).

There are forty-four sounds in English, but more than 200 ways of spelling them. We can render the sound 'sh' in up to fourteen ways (shoe, sugar, passion, ambition, ocean, champagne, etc.). Consequently, learning to spell English is more difficult than learning to spell most modern languages. The magnitude of the problem becomes apparent with comparisons to other languages. Italian and Turkish both use 27 letters to represent 27 basic sounds. German uses 38 symbols for 36 sounds. Russian uses 36 symbols for 34 sounds (Fay 1971:4).

Writing system is based on grapheme-phoneme correspondences, in which one letter or grapheme represents a sound. However, English correspondences are arguably not regular (Awad 2010:23). There is no one-to-one relation between English sounds and letters. The sound /k/, for example, can be represented in the orthography by the letter (k) as in *king*, (c) as in *cat*, (q) as in *queen*, and (ck) as in *back*. The vowel /i:/, can be represented by the letter (e) as in *be*, (ee) as in *cheese*, (i) as in *police*/, (eo) as in *people*, (ea) as in *leaf*, (ie) as in *field*, (ei) as in *seize*, (ey) as in *key*, (uay) as in *quay*. The opposite holds, when the vowel letter (u), can be

pronounced /u/ as in *put*, /ə:/ as *nurse*, /i/ as in *busy*, and syllabic /ju/ as in *university* (Rakas 2008:1).

Giegerich (1992: 37) observes that a phoneme may in English spelling be represented by different letters in different words; or a single phoneme may be represented by a sequence of two letters, each of which may elsewhere denote a different phoneme. For examples, the letter *g* is pronounced differently in words like *get* [get], *gem* [dʒem], and *genre* [ʒɑ:n]; in the words *give* [gɪv], *gipsy* [dʒɪpsi] and *gite* [ʒi:t]. Again, the same group of letters – *ch* – is read in three different ways in words like *child* [tʃaɪld], *charade* [ʃərə:d] and *character* [kærɪktə]. It is also quite difficult to account for the fact that words like *shy*, *mission*, *friction* and *ocean* use different letters: *sh*, *ss*, *ti*, *ce* to represent one and the same phoneme /ʃ/. Similarly, words like *four*, *cuff*, *laugh*, *pharmacy* and *lieutenant* use different letters to represent the same phoneme /f/.

English also includes many irregularly spelled words. For example, English includes homonym words that sound exactly the same, but are spelled differently, such as *hear* /here, *nose* /knows. Moreover, the language includes heteronyms, which are words that spelled the same, but have different meanings such as *resume* /resume, *bow* /bow, *minute* /minute. Furthermore, some words have different spellings that reflect American or British influence such as the American spelling of *behavior* or the British *behaviour*. So it is not surprising that many students find learning to spell a difficult experience (Wirtz 1992:1,2).

2.2 History of English Language

The story of the English language begins roughly 1,600 years ago with the decline of the Roman Empire. After the Romans left Britain in 450 A.D., Germanic tribes known as Jutes, Angles, and Saxons invaded, pushing the Celtic inhabitants (who had lived under Roman rule for 400 years) to the west. As Celtic and Latin words, roots, and pronunciations were absorbed into

the invaders' Low West German languages, Anglo-Saxon-or Old English- was born. The most common, frequent words of Modern English-like those for animals, family members, numbers, common objects, emotions, and universal daily activities-are preserved from Anglo-Saxon. Some examples include *goat, wife, mother, one, house, love, cook, and walk*. Of the 100 words used most often in English, all can be traced to Anglo-Saxon origins.

Famously in 1066, Britain was invaded by William the Conqueror from Normandy. As a result, the Norman French language was imposed on the British natives for almost 400 years. Norman French and Old English were gradually amalgamated, merging by the late 15th century into what is now known as Middle English. From Norman French English gained thousands of terms for legal concepts, social and moral ideals, and artistic values (such as *justice, peace, courageous, magnificent, and beauty*). Though the Normans spoke Norman French, their cultured class wrote in both their native tongue and Latin, languages that were closely related members of an Indo-European language family. Latin-based vocabulary became the language of scholarship, commerce, and official discourse (such as *solar, equine, residence, designate, and refer*).

During the Renaissance, which was a time of renewed interest in classical Roman and Greek culture and language, the growth of scientific disciplines created a need to name many discoveries. Scholars looked to Greek to coin new terms (such as *atmosphere, gravity, and chronology*). At the same time, as printed material became more common in the late 1500s, scholars trained in the classics brought even more Latin-based words (such as *malevolent, fortitude, maternal, stadium, and calculus*) into English.

What did all this merging, layering, and borrowing mean for English's spelling system? The short answer is that it became more complex: The pronunciation of some of the oldest Anglo-Saxon words diverged from their spelling, and both Norman French and Greek

contributed some new spellings. The English language has roughly double the number of words of seemingly comparable languages like German, Spanish, and French (Moats 2006:16).

Loan words contribute to the irregularities found in English spelling. Many words that are used today have been borrowed from other languages. When the words are borrowed, their original spellings are typically borrowed too (Hayes et. al 2005:8). This had the inevitable effect of moving spelling away from its straightforwardly alphabetic, letter-sound foundation (Templeton 1999:104).

2.3 English Spelling and Arab Learners

Within the context of English as a Foreign Language, it has been observed that students have serious problems in writing. Spelling is one such area where students seem to struggle (Meriem 2010:2).

Spelling is a complex cognitive activity in which many interrelated skills are involved . Mastering the English spelling system means learning the correct association between English phonemes and written graphemes. The fact that English spelling is more complex than that of Arabic, this is expected to pose several spelling difficulties for Arab students particularly in the early stages of spelling development (Al Jarf 2008:10). The greatest difficulty encountered by Arab students arises from the irregular spelling system of English compared with the greater regularity of the predominantly phonetic script of Arabic (Kharma & Hajjaj 1989:56).

Awad (2010:4) argues that English and Arabic have two different alphabets and differ significantly in terms of the complexity and systematicity of the spelling system. Arabic has twenty-eight consonants and has a triangular vowel system that consists of three pairs of short and long vowel phonemes. There is a one-to-one correspondence between the phonemes and the graphemes. Each phoneme is orthographically represented by only one letter individually. Accordingly, Arabic is said to have a transparent orthography. English, on the other hand, has

(according to the phonemic analysis) twenty-four consonants, twenty vowels and diphthongs (depending on the dialect). Twenty six letters are used for representing all the phonemes. Unlike Arabic, English has a complex mapping of graphemes and phonemes. There is no one-to-one correspondence between sounds and letters. Unlike the English spelling system, the Arabic spelling system is quite regular as there is evident correspondence between graphemes and phonemes and there are no complex rules for spelling.

Dehham & Mohammed (2008:21) report that the Arab learners' errors in English spelling may be traced back to the following possible tentative reasons: a) The complexity of English spelling system. b) The influence of the mother tongue. c) The students' carelessness in English spelling. d) Teacher do not emphasize the rules of English spelling thinking that the students have already mastered them in earlier stages of education. e) The lack of sufficient practice in English spelling.

Al Jarf (2008:7,8,9) attributes the spelling errors that the Arab learners of English make to the following reasons:

1. The students inability to hear or identify all the phonemes in the words they hear. Lack of exposure to the spoken language as a part of the English instruction seems to be the underlying source of this problem.
2. Inadequate knowledge of the English spelling rules. This may be attributed to the lack of the correct semantic, phonological and orthographic associations between the spoken sounds and the printed symbols.
3. Transfer of the Arabic spelling system to English due to the difference in orthographic complexity between English and Arabic. Arabic spelling is mainly phonetic and there is a close relationship between spoken phonemes and written graphemes. There is a one-to-one correspondence between phonemes (spoken sounds) and graphemes (written symbols). Each

consonant and each vowel has only one sound. Arabic has no double letters, no silent letters, no consonant and vowel digraphs, and no hidden sounds. Therefore, students in general and poor spellers in particular spelled English words with a non-phonetic spelling the way those words are pronounced. For example, Arab students reduced double consonants, and deleted final silent vowels. Insufficient exposure to the English spelling system and unfamiliarity with the differences between the English and Arabic spelling systems might add up to the Arab learners spelling difficulty. To reduce the influence of Arabic spelling on English, differences between the English and Arabic spelling should be pointed out.

4. Over generalizing some features of English spelling, such as silent letters, consonant and vowel digraphs, doubling of consonants in words that are not spelled with double consonants. This resulted in many invented words, words that are partially close to the target word, and confusing minimal pairs and homonyms. Overgeneralization errors may be due to lack of exposure to the English spelling system, insufficient experience and practice, and the way English words are grouped and presented to the students. This is probably due to inadequate spelling instruction and practice.

5. Student's mispronunciation: since students tend to spell English words the way they pronounce them, mispronunciation attributed to the spelling error rate. The student's mispronunciation is probably caused by insufficient instruction, practice, and feedback received in listening and speaking that the students take.

2.4 Spelling as a Developmental Process

Spelling development is a gradual process that occurs over time. Theories of spelling development were created in order to better explain how children learn to spell (Fay 2004:4). As with spoken language, spelling develops as children experiment, imitate, discuss, and are given

feedback that helps them refine their knowledge about words (Simon 2004:7). It is important for quality spelling instruction to understand the stages of developmental spelling (Burkhart 2009:4).

According to Gentry (1985:3) there are five stages of development when learning to spell: the precommunicative stage, the semiphonetic stage, the phonetic stage, the transitional stage, and the correct stage.

Pre-Communicative Stage

The pre-communicative stage is defined as the earliest level of spelling development when a child first uses symbols from the alphabet to represent words. The pre-communicative speller uses random strings of letters to represent words, but has no knowledge of sound-letter correspondence. He may or may not know the left to right directionality of English spelling. The pre-communicative speller may mix upper and lowercase letters, but typically shows a preference for uppercase letters in his spellings.

Semi-Phonetic Stage

The semi-phonetic stage represents the first approximations of a child to represent sounds with alphabetic symbols. During this stage, a child first begins to realize that letters have sounds that are used to represent the sounds in words. Spellings in this stage are abbreviated; one to three letters may be used to represent an entire word. Semi-phonetic spellers use letter names to aid in their spellings, thereby representing words, sounds, or syllables with letters that match their names (e.g. R for are). The principle of left to right directionality begins to emerge at this stage, and alphabetic knowledge becomes more complete.

Phonetic Stage

During the phonetic stage, a child's spelling becomes very readable. Phonetic spellers are able to represent more complete letter-sound correspondence, and letters are assigned solely on

the basis of sound, without regard to acceptable English letter sequences. Word segmentation and spacing are generally also evident in this stage.

Transitional Stage

The transitional stage of spelling plays a significant role in children's progression toward Standard English spellings. During this stage, a speller begins to rely more on the visual and morphological representations of words than on the phonology of words when writing them in printed form. Transitional spelling is characterized by the following: vowels appear in every syllable, vowels and consonants are employed instead of letter name use (e.g., EL rather than L), common English letter sequences are used, and endings such as plural "s", possessive "s", "ing", and "ed" are spelled correctly. Transitional spellers typically include all appropriate letters, but may interchange the order of letters. Spellers in this stage also show alternate spellings for the same sounds (e.g., the long "a" spelled with "ei", "a", and "ai"). Spellers in the transitional stage also generally use learned words that are spelled correctly more frequently in their writings.

Correct Stage

The correct stage of spelling development has typically been viewed instructionally since it pertains to different grade levels of spelling mastery. Once a child has reached the transitional stage of spelling development, he continuously learns to spell with formal spelling instruction and writing experiences. The correct stage of spelling is achieved once a speller has established knowledge of the English orthographic system and its rules and can apply those rules across a variety of environments. The correct speller also accurately spells prefixes, suffixes, contractions, and compound words. He recognizes misspellings and uses alternative spellings to correct the mistakes. Spellers in the correct stage also accumulate a large inventory of learned words.

2.5 Forms of Spelling Knowledge

According to NEALS(1998:12) the knowledge that students need if they are to become proficient spellers takes four different forms: phonological knowledge, visual knowledge, morphemic knowledge and etymological knowledge.

Phonological knowledge: It includes teaching students:

- the names of letters, the sounds they represent and the ways in which letters can be grouped to make different sounds such as vowels, consonants, consonant blends, word families,
- the concept of onset and rime, as in the word *pink*, *p* is onset and *ink* is rime, and
- about how to segment the sounds in words into “chunks” of sound.

Visual knowledge :It includes teaching students:

- to recall and compare the appearance of words, particularly those which they have seen or learnt before or those which are commonly used,
- to recognize what letters look like and how to write them, and
- to recognize that letters can be grouped in particular ways, for example, endings that frequently occur in words.

Morphemic knowledge :It includes teaching students:

- how to use morphemes to assist them to spell words,
- how compound words are constructed, and
- knowledge of suffixes and prefixes and the generalizations that can be made and the rules that can be generated about adding them to words.

Etymological knowledge : It includes teaching students:

- about the roots of words and word meanings, origins and history, and
- that often particular clusters of letters that appear in words not only look the same but also are related in meaning, often because of their root for example, *aquatic*, *aquatint*, *aquarium*.

Understanding the importance of the four forms of knowledge and their relationship with the process of learning to spell has significant implications for teaching. Students need explicit teaching about the phonological, visual, morphemic and etymological aspects of spelling that are relevant to their stage of spelling development to ensure that they have a balanced repertoire on which to draw as they approach the spelling of both known and unknown words.

3. Spelling Instruction

3.1 Historical Overview

Spelling instruction dates back to the 18th century when Noah Webster introduced the first *Blue-Backed Speller* (Bloodgood 1991:11). This type of textbooks taught pronunciation and grammar as well as spelling. These early spelling books contained word lists. The lists were often quite long and at times taught as many as 50 words. The words were presented as rote memory tasks. The lists were given to all students in a grade level regardless of developmental levels, and they were to be studied as a rote memorization task (Schlagal 2003 : 23,46). Rote memorization was used as the study technique because it was assumed that the English language was too irregular to teach and would be best achieved through memorization. This technique led to the emphasis of teaching students to develop a memory for the spelling of words (Templeton & Morris 2001:18).

In the 19th century, spelling textbooks continued to be designed not only to teach spelling but also pronunciation and grammar. Memorization continued to be the way in which to learn spelling (Schlagal 2002:46). Even in the 19th century, spelling was taught with the hopes of improving written communication (Culpepper2010:11).

Serious research on spelling began in the early 20th century and was directed toward issues of memory and to the question of whether or not it was more advantageous to teach spelling by a context method or by a list method. A question was raised whether spelling should

be taught in context (during reading or writing instruction) or to continue using a list of words each week. The focus of spelling books narrowed, leaving behind the larger issues of the language arts to focus more exclusively on spelling itself. New strategies to study high frequency words, involving memory activities, were developed. Some of these memory activities included writing the spelling words multiple times, closing the eyes to visualize the word into memory, and self-correcting misspelled words (Schlagal 2003: 46,47). During this time, teachers and educational experts realized that spelling alone was much more important than it was once believed (Culpepper 2010: 11). However, the emphasis was still on memorization, drilling and testing.

In the last twenty years, there has been much discussion about the most effective and efficient ways to teach spelling. Many researchers have their own opinions about what is best. Some use lists that are dictated from a book, and some use lists made by the students and teachers. With these different opinions, one can see that there are already many different views to how spelling can be taught. Is one better than another, or would it be beneficial to pick and pull from all of the different views and use the most effective parts from each one? (Culpepper 2010:11).

3.2 The Current State of Spelling Instruction

English language is the most difficult of all languages to read, write, speak and understand. There are only 26 letters of the alphabet; however, there are many phonics and spelling rules that correspond with each other. It is virtually impossible for a child to remember them all and know when to use them (Angelisi 2000:4). Spelling is a subject that allows for no creativity or differences of opinion. Only one spelling of a word is correct. It is a precise skill which is important yet difficult to master at any level of development (Bollman 1991:10). Because English words are not very visually distinctive (for example, car, can, cane), it is

impossible for children to memorize more than a few dozen words (Moats 2006:6). For many students, learning to spell is a complex process that involves them in the act of problem-solving about how to spell accurately the words they want to use (NEALS 1998:8). There are students who are at risk for written language failure if we do not provide specific instruction in the area of spelling (Edmands 2000:16). The main problem in most children classrooms is their inability to spell words correctly and this is due to the lack of useful spelling instructions based on solid research and development (Baleghizadeh & Dargahi 2011:152).

3.3 Spelling Instruction in the Classroom Today

The ultimate goal of spelling instruction is to develop skills that will enhance students' abilities and confidence as effective writers and communicators (DuBois et. al 2007:33). In all children's development, it is a matter of time that the written word becomes an important entity and that a child's life will be heavily affected by his or her relationship with print (Chung 2006:134).

Unfortunately, spelling is not taught effectively in many schools. An enormous gap exists between current research knowledge about spelling and contemporary classroom practice. Studies in the past two decades have revealed much about the normal development of spelling ability and how students can be helped most effectively to become proficient spellers. Research has also explored the many causes of spelling difficulty and disability. Many teachers remain ignorant of much of this information. Teachers remain confused about their role in relation to spelling instruction; and they often leave students' spelling skills to develop incidentally. Teachers own knowledge of spelling principles and spelling strategies is often lacking in depth, so they are uncertain precisely what needs to be taught and how to teach it, even if they have the desire to give spelling greater prominence in their literacy program. Many teachers appear not to be fully aware of the various factors that can cause some students to have difficulties learning to

spell. They are uncertain how to determine the instructional needs of weaker spellers and how to tailor their teaching to meet these needs. Given these weaknesses in many teachers' content knowledge in relation to spelling, it is not surprising that spelling is not well taught (Westwood 2008:8).

Because spelling is not taught well, it has been characterized by teachers and students as boring, and one of the least favorite academic areas (Nies & Belfiore 2006:163). It is an area that teachers often describe as problematic and inherently challenging to teach due to the nature of English language. Common approaches such as pre-set word lists, weekly tests and the use of text books are often used as a means of managing the difficulties of teaching this aspect of the curriculum and also as a perceived solution to the challenges of working with a class of students with a vast range of spelling abilities (Bush 2010:2). The plethora of programs today gives teachers a list of words and does not give much support beyond that. With the lack of support for spelling instruction, many teachers are not teaching spelling effectively or efficiently. So, spelling can be hard for many of them to teach (Culpepper 2010:13, 14).

The typical way teachers implement spelling into the classroom is through an approach that follows closely with a spelling textbook or series. This approach may include doing activities such as: memorization tasks, word sorts, writing spelling words in a sentence, writing spelling words numerous times, putting the spelling words in alphabetical order, unscrambling spelling words or solving puzzles, and looking words up in the dictionary (Jones 2006:3). Many teachers teach spelling by writing words on flashcards and exposing students to them many times or by having students write words 5 to 10 times (Joshi et. al 2009:7). Students are given words in lists whether made by the teacher or taken from spelling books. They usually have a week to memorize the words for the spelling test that will be given. The next week, students will be given a new set of words to memorize and be tested on (Culpepper 2010:12).

The main problem in most children classrooms is their inability to spell words correctly and this is due to the lack of useful spelling instructions based on solid research and development. Traditionally, education has been more concerned with what to teach in spelling rather than how it might be taught. In short, spelling does not appear to be receiving the priority it deserves (Baleghizadeh & Dargahi 2011:152).

3.4 How Spelling Should be Taught?

Okyere et. al (1997:51,52) report that spelling is one of the important skills in written communication, and it is an essential component of a total language arts curriculum. When children receive effective spelling instruction, they are more likely, during written language exercises, to focus on clarity, logic, and the substance of their writing, not on the orthography of spelling.

Teaching spelling should not consist merely of presenting students with lists of words without the explicit teaching of spelling knowledge (NEALS 1998:22). Learning to spell is not a matter of memorizing words, but a developmental process that culminates in a much greater understanding of English spelling than simple relationships between speech sounds and their graphic representations (Lutz 1986:2). Spelling should not be taught as an isolated operation; reading, writing, and spelling activities are the contexts within which children gradually learn to spell. Learning to spell must be embedded in all areas of English language learning- reading, writing, and speaking. Children need to write everyday and experiment with forms of writing in which their spelling understanding and fluency is developed and extended; they will continually recall prior knowledge as they tackle new words. Children must be encouraged to write even when they can't spell accurately, since attempting to spell is part of the learning process (Simon 2004:4). A primary cause of children being poor spellers is that teachers focus too much, or only,

on a weekly spelling test and do not teach spelling explicitly or in relation to other subject areas, such as writing (DuBois et. al 2007:21).

Spelling instruction needs to be carefully sequenced so as to build up from common, regular words to uncommon, specialized words (Joshi et. al 2009:14). English spelling can only be learned by active practice (Warda 2005:3). Students require practice over a long period of time to become proficient spellers (Smith et. al 2001:33). The evidence is clear that kids who write frequently become better writers (Gentry 1987: 37).

The missing link in the teaching of spelling is often the explicit instruction that enables students to learn and understand key knowledge and strategies (Bush 2010:5). Children can become automatic, efficient spellers if appropriate methodology is used along with a carefully planned curriculum. A student needs to be taught spelling concepts through direct, explicit, multisensory phonetic approach (Edmands 2000:16). By teaching spelling in a multisensory manner and teaching students to monitor and self-correct their writing, students will become effective readers and writers in all content areas (Dubois et. al 2007:33).

Spelling should be taught systematically. The right words and patterns must be presented at the right time in the student's development (Gentry2010:3). The explicit and systematic teaching of spelling knowledge, skills and strategies at all stages of spelling development will assist students in developing the ability to produce correct spelling consistently. Students experiencing difficulties with spelling will need additional support and explicit teaching to assist them to gain the knowledge, skills and strategies they need in order to become effective spellers. Students should be taught in a systematic and explicit way about the types of spelling knowledge that are appropriate to their writing purposes and stage of spelling development (NEALS 1998:28).

Students can develop a deep understanding of English spelling by studying the meanings of roots, prefixes, and suffixes; families of related words; the historical development of the English language; and words' language of origin (Moats 2006:14). This process moves ahead much more quickly and successfully if instruction in sounds and letters is systematic, explicit, and structured (International Dyslexia Association 2008:2). The spelling progress of children can often be improved if they are encouraged to think about words in print and are given instruction that is directed toward their current spelling level (Boylan 1995:1).

It is the responsibility of all teachers, primary and secondary, to value the correct spelling of all words in students' writing. It is also important for teachers to identify the spelling demands of their learning areas and to teach students explicitly the specific vocabulary of their subjects and the spelling knowledge students need in order to spell this vocabulary correctly (NEALS 1998:15).

To be an effective teacher of spelling, one must have a genuine interest in words, their origin, meaning and construction, and must also have an understanding, phonological, orthographic, and morphographic principles and rule that govern English spelling. It is important that teachers also recognize and can articulate the various strategies that a speller can use when faced with spelling an unfamiliar word (Westwood 2008:8). Teaching spelling requires that the teachers hold a head full of techniques to use in responding to different types of learners, just as the teacher does for any subject in the curriculum (Smith et. al 2001:32).

Based on the above discussion , spelling should be taught explicitly and systematically.

The explicit and systematic spelling method should:

- 1- focus on teaching appropriate words related to:
 - the students' current levels of performance,
 - the class program and student needs,

- 2- explicitly teach spelling patterns,
- 3- teach in small chunks,
- 4- provide opportunity for sufficient practice and feedback,
- 5- ensure maintenance of previously learned words,
- 6- provide for generalization of newly acquired spelling skills,
- 7- emphasize the importance of correct spelling,
- 8- include dictionary skills, and
- 9- be integrated across all Key Learning Areas (NSW 2007:153).

3.5 Procedures for Effective Teaching of Spelling

Gentry (1987:29) indicates six procedures for effective teaching of spelling that have received research support:

- 1- Allot sixty to seventy-five minutes per week to formal spelling instruction.
- 2- Present the words to be studied in list or column form.
- 3- Give the children a pre-test to determine which words in the lesson are unknown. Have them study the unknown words, then administer a post-test.
- 4- Have the children correct their own spelling test under your direction.
- 5- Teach a systematic technique for studying unknown words.
- 6- Use spelling games to make spelling lessons more fun.

To teach spelling effectively teachers need to understand:

- how the spelling system works,
- how to give students access to the four types of knowledge which they need in order to spell words,
- how to plan classroom spelling programs using the major teaching strategies,
- how spelling develops throughout all stages,

- how spelling has links with all other aspects of language learning, particularly reading and writing,
- how to cater for the spelling needs of a diversity of learners,
- how to monitor and assess spelling development,
- how to intervene early and assist students who are experiencing difficulties with spelling,
- the importance of positive home–school partnerships in spelling, and
- the need for whole-school action regarding the teaching of spelling.

Teachers design, encourage, provide feedback, observe and record while students practice, initiate, select, use, record and evaluate their own spelling development (NEALS 1998:21).

3.6 Common Beliefs about Spelling instruction

Dorn & Soffos (2001:55,61) identify six common beliefs about spelling instruction.

These common beliefs include:

1. Spelling instruction should be grounded in cognitive theories of perception, concentration, and organization of patterns.
2. Children should learn problem solving strategies for spelling words.
- 3 . Spelling instruction should consider the cognitive aspects of memory functions.
4. Children should practice spelling strategies in meaningful ways, so as to promote automaticity, transfer, and internalization.
- 5 . Self-reflection and self-correction are important goals of the good speller.
- 6 . Spelling lessons should recognize the social side of language.

Dorn & Soffos (2001) also identified four important principles about spelling that children need to understand . Children need to understand:

1. the letters are written to represent spoken sounds,
2. the letters should be written in the same sequence in which the sounds are spoken,

3. some letters are combined to form patterns that represent certain pronunciations in a single syllable, and

4. some words occur a lot and need to be remembered as a whole (p. 58).

3.7 Common False Assumptions about Teaching Spelling

Too much that is known about how to teach spelling isn't being put into practice. I can think of no subject we teach more poorly or harbor more myths about than spelling. In spite of volumes of research, teachers still use the same unsubstantiated teaching formulas (Gentry 2001:1). Gentry exposed common false assumption about teaching spelling:

1. All Children can become expert spellers if they try hard enough. The ones who do not are probably lazy.
2. Children who make 100% on a spelling test should be able to spell the same words correctly two weeks later in their writing.
3. Expert spelling is "caught" from reading and writing.
4. Spelling instruction should focus on a relatively few high-frequency words.
5. Spelling is best taught in meaningful context. The best way to teach spelling is to focus on writing and teach spelling in use.
6. "I am already using an effective method of teaching spelling ."
7. Spelling doesn't matter.

3.8 Assessing Spelling

Assessment is integral to the teaching and learning of spelling. Effective assessment provides information about students' spelling achievements and assists teachers to plan spelling programs necessary for students to make further progress. Although assessment might take place informally in the classroom, it also needs to be planned systematically, to ensure that teachers monitor the progress of their students in spelling, using the outcomes appropriate to each stage as

a basis for their teaching programs. The systematic assessment of spelling links assessment with teaching and learning in a continuous process (NEALS 1998:23).

When testing students' spelling, it's important to go beyond simply marking words right or wrong. The assessment should be an opportunity to evaluate students' understanding of sounds and conventional spelling patterns. The kinds of words that students miss and the types of errors they make are important in evaluating their spelling achievement and their understanding of language structures (Joshi et. al 2009:13).

According to NEALS(1998:24) teachers can use some of the following methods to collect information, analyze behavior and make judgments about students' spelling:

1. observing spelling behaviors in modeled, guided and independent sessions,
2. analyzing and keeping records of the spelling strategies which a student uses in guided spelling,
3. examining and analyzing students' writing samples to determine which types of spelling knowledge are being applied,
4. analyzing results of tests,
5. using students' self-assessment, such as independent spelling records, and
6. examining performance on specifically designed tests, such as dictations and proofreading exercises, using words derived from modeled, guided and independent sessions.

Students experiencing difficulties with spelling should be identified and carefully assessed, and appropriate spelling programs need to be put in place to assist them . Such programs will be implemented and continuously monitored as the students progress through the school and as they learn in different key learning areas.

How can teachers use assessment to improve learners' spelling?

1. Use Assessment for learning to focus on where your learners are and what they need to achieve.
2. Observe your learners engaging in writing and spelling.
3. Gather writing samples . Based on your observations, plan for the next step of development for this learner.
4. Use Assessment as learning for you and your learners to identify and reflect on evidence of progress.
5. Use Assessment of learning to make valid and reliable judgments of learner achievements over time (Literacy Secretariat 2010:2).

3.9 Spelling and Spell-Checkers

Since the advent of word processing and spell checkers, some educators have argued that spelling instruction is unnecessary. It's true that spell checkers work reasonably well for those of us who can spell reasonably well, but students who are very poor spellers do not produce the close approximations of target words necessary for the spell checker to suggest the right word. In fact, one study reported that spell checkers usually catch just 30 to 80 percent of misspellings overall (partly because they miss errors like *here vs. hear*), and that spell checkers identified the target word from the misspellings of students with learning disabilities only 53 percent of the time(Moats 2006:12).

Spell checkers are wonderful tools for the small mistakes that good spellers make. In the hands of the student with good language skills, the spell checker is a real timesaver. However, it can actually interfere with the learning process. The writer must rely on starting the word correctly and getting most letters right, and the spell checker will not correct when a misspelling is another legitimate word (Jones 2009:2). Spell checkers have not replaced the need for writers

to understand how to spell words correctly. Such technology assists in proofreading, but is not a substitute for spelling knowledge (NEALS 1998:8). It does not eliminate the need to learn to spell accurately. It is helpful for those who are reasonably good spellers, but it cannot compensate for poor spelling (Joshi et. al 2009:16).

Spell checkers only catch a limited range of spelling errors and can create errors in word selection. Relying on spell checkers also critically limits language awareness, memorization, visualization and automaticity (Literacy Secretariat 2010:1). Computer spellcheckers are not helpful unless the student has already achieved basic spelling skill (International Dyslexia Association 2008:3).

The real “computer” for spelling is in the writer or reader’s brain. That’s important, because it means that the writer or reader who can store knowledge of correct spelling and activate areas for automatic recognition of spelling can focus on ideas when writing, instead of focusing on the spelling of words (Gentry 2007:40). Knowledge buried in a computer’s memory is little help in kindling inspiration, fostering critical thinking, and promoting mental development. To develop solid language skills is to equip oneself with the raw materials for complex thought and the essential tools for communication. Spelling is an important building block in developing solid language skills (Warda 2005:2).

Spelling instruction has not diminished with computerized spell checkers-and there’s no reason to believe that it will diminish in the foreseeable future. Even if spell checkers were improved dramatically, such that they caught virtually all spelling errors and supplied the right word as the first choice, the type of in depth word study would still be extremely valuable to students (Moats 2006:10).

4. Major Approaches to Spelling Instruction

Spelling has always been a controversial area of learning. Some educators argue that it doesn't matter if a person spells correctly-computers correct spelling errors anyhow! Educators over time have held various beliefs. Some theorize that phonics is the strategy to use. Some advocate that spelling is simply a case of memorization or that children learn to spell incidentally when reading and writing (Simon 2004:2).

An abundance of research on spelling content and spelling instruction has been conducted throughout the past 60 years. Spelling instruction continues to be a literacy area that has conflicting views and is approached by teachers differently. Spelling continues to be an important literacy skill needed for writing and reading development and more attention needs to be given to spelling instruction, strategies, and teaching methods (Davis 2011:6).

Although there is more than one approach to the teaching of spelling, there is still a strong practice found in schools where students follow traditional spelling programs that include weekly lists and spelling tests. The standardized lists of words are often the same for all students regardless of readiness or ability. Such programs do not recognize spelling as a developmental process (Burkhart 2009:2).

According to Simonsen &Gunter (2001:98) the most promising approaches for teaching students to be better spellers are: (a) phonemic, (b) whole-word, and (c) morphemic approaches.

4.1 Phonemic Approach

Understanding the relationship between letters and their corresponding sounds is an important skill for successful reading and spelling performance. Within the context of reading, letter-sound correspondence (also known as honemics) allows students to identify the sounds that correspond to the written symbols (letters) in printed reading passages. For spelling, students identify the written letters that correspond to the spoken sounds. Many words in the English

language have regular phonemic patterns. Predictable patterns for regular words allow students to spell these words solely on the basis of their letter-sound relationships. For example, the word *hat* has three sounds /h/, /a/, and /t/ and can be correctly spelled using the three letters that correspond with each of those sounds (*h*, *a*, and *t*).

Students who have not mastered phonemics need basic instruction in those skills. This instruction will enable them to spell many high-frequency, regular-sound words. Understanding the relationship between printed letters and their corresponding sounds is an essential skill for successful spellers.

4.2 Whole-Word Spelling Approach

The phonemic approach can be used to spell a large number of regularly spelled words (i.e., words that are spelled just like they sound, such as *hat* and *stop*). Unfortunately, not all words in the English language can be spelled correctly using letter-sound correspondence. For example, the word *phone* cannot be spelled correctly by sounding it out. For these irregularly spelled words, a different instructional strategy is required.

The whole-word approach to spelling typically uses some explicit or implicit learning strategy for students to memorize word spellings. In typical whole-word spelling programs, words are grouped together in a list based on some similarity (e.g., similar beginning sound, like /wh/ or /th/, or words belonging to a common theme, like words related to states or countries). Students are often required to memorize the words for a test given later in the week .

The whole-word approach to spelling instruction has both advantages and disadvantages. The primary advantage to the whole-word approach is that it works very well for words that are considered irregular. Irregular words are words that cannot be spelled by applying general spelling conventions. Some examples of irregular words are: *yacht*, *quiet*, and *friend*.

The disadvantage to the whole-word approach is that it relies on rote memorization for all words, instead of taking advantage of phonemic rules that can simplify the task of spelling. Relying solely on rote memorization for spelling could be compared to requiring students to memorize the answers to all multi-digit subtraction problems instead of teaching them the rule for borrowing. To summarize, rote memorization is not the most efficient strategy for spelling instruction, unless the spelling words are irregular, meaning that they cannot be spelled by applying general spelling rules.

There are two fundamentally different approaches that underlie whole-word strategies for spelling instruction. Implicit approaches to instruction rely heavily on the philosophy that exposure to new concepts will lead to the learning of those concepts. Implicit approaches to spelling instruction give students the information that is to be learned (*exposure*), but they may not provide much guidance on how to learn the information. The use of weekly spelling lists and tests often is an implicit learning strategy. In this approach, the students are provided a list of words to learn and a date to learn them by, but are not given specific instruction for how to learn them.

By contrast, explicit approaches to instruction follow the philosophy that students need to be guided by teachers through specific steps of instruction that lead directly to learning of a skill or concept. This explicit approach leads students through gradual steps toward the goal of accurate spelling performance.

4.3 Morphemic Approach

A morphograph is the smallest unit of identifiable meaning in written English. Morphographs include prefixes, suffixes, and bases or roots. Many words in the written English language can be created by following a small set of rules for combining morphographs. For example, the word *recovered* is made up of the prefix *re*, the base *cover*, and the suffix *ed*. Using

the principles that govern the structure of words, the morphemic approach to spelling instruction teaches students the spellings for morphographs rather than whole words and the rules for combining morphographs to spell whole words correctly. For example, using a morphemic approach, students would be taught that when a base ends in the letter *e* (e.g., *make*) and is to be combined with the */ing/* suffix, the letter *e* is always dropped (*make* becomes *making*).

The morphemic approach to spelling instruction offers several advantages. First, morphographs are generally spelled the same across different words. For example, the morphograph *port* is spelled the same in the words *porter*, *deport*, and *important*. Second, when the spelling of a morphograph changes across words, it does so unpredictable ways. The morphograph *trace* is spelled differently in the words *traces* and *tracing*, but the change is governed by the rule for dropping the final *e*. Third, the number of morphographs is far fewer than the number of words in the written English language, and the number of principles for combining morphographs is relatively small. Therefore, teaching students to spell morphographs and teaching the rules for combining morphographs will allow students to spell a far larger set of words accurately than by teaching individual words through rote memorization of a weekly spelling list.

4.4 Copy, Cover and Compare

The field of education is one which has experienced significant and continual change over many decades. Educationalists are continually seeking some form of balanced curriculum that delivers rich, effective and engaging experiences for students resulting in deep understanding rather than a superficial bank of memorized facts or procedures. Despite this rapid and continuous change, the teaching of spelling is an area that has often been taught in the same way for many years, regardless of the effectiveness of the approaches used (Bush 2010:2). "The range of strategies,

materials, and methods available to teachers to teach spelling is probably smaller and less variable than in any other basic skills area"(Davis 2011:4).

The widespread problems in spelling because of the irregular and unpredictable nature of the English language, is often not conducive to traditional means of instruction. Students, especially those with learning difficulties, may contribute to needing alternatives means of instruction. They need specialized instruction to help them achieve in spelling (Spaine 1999:63). The learning experiences of spelling should assist learners in achieving success on the basis of interesting, purposeful and meaningful spelling instruction (Zakiah 1996 :17). "Spelling can and should be taught as an interesting task that strengthens those relationships among reading, writing, and vocabulary knowledge" (Bloodgood 1991:15).

When teaching students the fundamentals of successful spelling, teachers must strive for the same rigor and principles of teaching and learning they apply to other curriculum areas. This includes teaching for understanding, teaching transferable knowledge, skills and concepts, providing experiences that enable students to be actively engaged in their learning rather than passive receivers of information and encouraging students to problem solving, question and inquire (Bush 2010:4).

At a time when educators and researchers are (a) asking for more effective spelling instruction (b) seeking solutions to the difficulties faced by students in the areas of spelling and (c) responding to requests for scientific research-based practice and response to intervention, the effectiveness and student preference of CCC seems to be one strategy worth pursuing. CCC is a practical, research-based method that has been shown to be effective across many academic areas (Nies & Belfiore 2006 :164, 196).

4.4.1 What is the CCC Strategy?

CCC is a simple, efficient, self-managed academic intervention that can be used to improve accuracy, fluency, and maintenance across students, curricula objectives, academic skill domains, and settings (Skinner et. al 1997:295). "Academic performance improvements in the areas of spelling, mathematics, and geography have been attributed to the use of CCC procedures for students identified with disabilities as well as students without disabilities" (Kosmac 2009:14). CCC has been shown to be equally or more effective than other commonly used instructional practices and the use of CCC is highly recommended as an effective, socially valid spelling intervention to increase the number of words students spell correctly on tests and in their everyday writing (Moser 2009:11, 96).

4.4.2 CCC Steps for Teaching Spelling

CCC, in its most basic form, involves just three few steps. First, the student looks at an academic stimulus (written word). Second, the student covers the academic stimulus and then makes an academic response (write the word). Third, the student then uncovers the stimulus item and evaluates her or his last academic response by comparing it to the stimulus item. If the student determines that the last response was accurate, the student moves to the next stimulus item and repeats the CCC procedure. If the student determines that the response was incorrect, the student performs an error correction procedure (repeats CCC procedure or engages in positive practice) before moving to the next stimulus item (Skinner et. al 1997:296).

4.4.3 Advantages of the CCC Strategy

There are many advantages of CCC strategy. Among these advantages are the followings:

1- The strategy is simple and efficient, provides discrete learning trials for students, and can be individualized (Moser 2009:7).

2-Students using CCCC have multiple opportunities to respond to the presented stimuli and practice immediate error self-correction when checking their responses to the stimuli (Moser2009:7).

3- The brief time required for each CCC learning trial allows students to complete many learning trials in a minimal period of time (Mong & Mong 2010:274).

4- Because CCC is a simple intervention with few, clear, discrete- steps, training and re-training takes very little time allowing more time for teachers to teach and students to learn (Skinner et. al 1997:298).

5- Since CCC is designed to be a self-managed intervention, not only are students able to self-correct mistakes and quickly practice correct responses, but they also are able to work independently and at their own pace. Teachers may provide supervision, monitor student progress and develop CCC materials; however, the student manages the core intervention (Kosmac 2009:14).

Based on the forgoing discussion, it is clear that self correction is the main component of CCC strategy.

4.4.4 Self Correction

Self correction is a strategy suggested as a teaching procedure to improve spelling. Through self correction, students learn to spell by first comparing their misspelled words to a model, identifying specific types of spelling mistakes, then correcting their mistakes by themselves and finally writing the correct sequence of letters for the words (Okyere 1990 : 5). Spelling achievement improves when students are required to self -correct their spelling errors. Effective application of self correction practice remains an effective way to learn how to spell unknown words (Morton 1996:2).

The self correction approach provide the learners with specific instruction on correct spelling and the opportunity to correct their errors (Zakiah 1996:3). It does not only enable students to focus specifically on letter sequence, but also allows students immediate corrective feedback on their spelling efforts because they make their own corrections by comparing each spelled response to a written model. Self-correction procedures are paced, allowing students to work at their own speed, and provide ample opportunities to respond as well. In addition, the procedure is flexible, easy to use, tailored to meet individual needs, and it can be transported to other classrooms or home settings for additional practice. This combination of these factors makes self-correction a powerful instructional tool for remediating the spelling difficulties of students with learning problems (McGuffin et. al 1997:464, 274).

There have been several studies comparing self-correction interventions to traditional spelling instruction in which the student writes multiple copies of a spelling word. In these studies, self-correction has been identified as the most critical element contributing to spelling achievement (McNeish 1985, Okyere 1990, Okyere et. al 1997, Wirtz 1992, McNeish et. al 1992, Zakiah 1996, Grskovic & Belfiore 1996, McGuffin et. al 1997, Spaine 1999, Gomez & Belfiore 2000, Ruma et. al 2007, Barbetta1994, Morton 1996, Morton et. al 1998, Alber & Walshe2004).

There are two types of self correction in term of timing. The first is immediate self correction and the second is delayed self correction. The focus on the followings will be on immediate self correction as it is the one that is employed in CCC strategy.

4.4.5 Immediate Self Correction

The collective results of a variety of error correction studies suggest that error correction during the acquisition stage of learning should be immediate (conducted before the student proceeds to the next item or problem). Error correction that is quick and rapidly tells, shows, and demonstrates the correct response in several seconds is generally better than lengthy discussions and explanations in an effort to help the student "understand" his or her mistake (Morton et. al 1998:333). "One technique frequently cited as being most effective is this: have children correct their own spelling errors immediately. Having them correct their own errors immediately seems to aid their visual memory" (Gentry 1987:29).

Immediate self-correction step is so effective is that with 44 sounds in the English language and approximately 250 ways to write them, the student will often puzzle over the appropriate spelling for the sound he hears. The immediate self-correction gives him the answer immediately after he has puzzled over it. When a student finds out immediately, while the elements of the problem are fresh in his mind, his knowledge is "reinforced": if he finds he is right, he becomes positive; if he finds he is wrong and checks at once to find out why he was wrong, he can sort out the points of the words that puzzled him and becomes sure of them. It is valuable and important for students to correct their own work frequently and in a timely manner. Teaching students to reread their own writing and make immediate corrections independently is an important part of teaching students the importance of correct spelling (Du Bois et. al 2007:27). "With immediate self correction procedure, everyone learns from his mistakes" (Beverly 2010:5,6).

The results of studies conducted by (Barbetta 1994, Morton1996, Grskovic & Belfiore1996, and Morton et. al 1998) in which they compared the effects of the immediate self correction and the delayed self correction on the spelling acquisition, revealed that immediate

self correction is more effective than the delayed one in the number of words spelled correctly and in the maintenance of the correct spelling over time. In addition, the results also indicated that students preferred the immediate self-correction over the delayed one.

Skinner et. al. (1997:297) indicate that the immediate self correction component of CCC prevents students from practicing inaccurate responses. Immediate self-correction ensures that the last response within each CCC learning trial is correct. Therefore, self-correction may prevent future errors due to recency effects. Responding immediately after looking at the academic stimuli also minimizes response errors during CCC learning trials.

In other academic areas, (El Saadawi et. al 2010, Fajfar et. al 2010, Brosvic et. al 2006, Lemley 2005, Dihoff et. al 2003, Scheeler & Lee 2002 and Bennett & Cavanaugh1998) conducted studies to compare the effects of immediate versus delayed feedback. The results of these studies revealed that the immediate feedback was more effective than delayed feedback in the acquisition and maintenance of the topics under investigation.

4.4.6 Advantages of Self Correction

According to Okyere (1990 :163,164) spelling self correction has the following advantages:

- 1- The procedure can be used with large groups, small clusters and individuals.
- 2- Student mastery is linked to specific words , not a passage of time. The self correction procedure enables the students to practice words until they are mastered, unlike the traditional approach where regardless of the students' performance with former words, new sets of words are issued each week.
- 3- Direct instruction on specific words is provided during the self correction procedure, improving the spelling performance of students.
- 4- Self correction procedure provides the student with immediate feedback. Students correct their own spelling mistakes immediately.

5- Self correction is easy to use. It is a manageable and flexible spelling procedure that can be incorporated in any classroom.

6- Self correction can be combined with other subjects or skill areas or approaches, for example, written expression.

7- Self correction can be implemented in home-based programmes where parents serve as monitors for spelling performance.

8- Self correction enables students to be responsible for their work, giving the teacher time for coordinating, and monitoring implementation of the learning tasks. Also, the teacher is freed to attend to peculiar problems of individual students, resulting in an effective learning environment.

Commentary on Literature Review

This section dealt with the theoretical framework of the study in order to give a clear vision about the topics related to spelling skill.

Having reviewed these topics, the researcher could affirm the followings:

1- Spelling is of great importance not only to be a good writer but also to be a good reader, a good communicator and a successful person in education and in life as well.

2- Spelling is one of the most difficult areas of the English language, and more attention should be paid to this important skill.

3- The traditional approach for teaching spelling, which is widely used in classrooms, is ineffective and there is a need to try other approaches and strategies.

4- CCC strategy for teaching spelling is more effective than other commonly used instructional practices. The use of CCC is highly recommended as an effective, socially valid spelling intervention to increase the number of words students spell correctly on tests and in their everyday writing.

Chapter II (B)

Previous Studies

Introduction

The purpose of this section is to review previous studies related to spelling instruction. The section surveys twenty-eight studies thoroughly in an attempt to support the current study. It is an opportunity to benefit from the studies procedures, tools, results and recommendations. The studies are divided into three domains and sequenced thematically. The first domain, which includes twelve studies, reviews studies related to CCC strategy and its role in improving spelling skill. The second domain also contains twelve studies related to the impact of self correction, as the main component of CCC strategy, on improving spelling skill. The third domain consists of four studies related to the effects of immediate self correction, as compared with delayed self correction, on spelling skill. These three domains are followed by the researcher's comments on the previous studies.

1. Studies Related to CCC Strategy

Carter et. al (2011)

The purpose of this study was to evaluate the effects of CCC for teaching spelling of commonly used words with four high school students. There were four participants in the investigation. Three of the four were below grade level in spelling from tests. The setting for this study was a self-contained behavior intervention high school classroom. The classroom was housed in a large urban high school located in the Pacific Northwest, USA. A combination multiple baseline with a reversal design across participants was used. The dependent variable was the percent correct for 240 of the commonly used words. A correctly spelled word was defined as a word that exactly matched the spelling of the word on the spelling list. The percent correct was obtained by dividing the number of correct words by the total words possible. During baseline this consisted

of 240 words and for the CCC and reversal condition, a total of 10 words were scored each session. Data were obtained through pre-post spelling achievement tests. Data for all participants were taken over a ten-week period. The effectiveness of CCC was evaluated with combination multiple baseline and reversal design. The results of the study indicated that the use of CCC increased the percent of words spelled correctly for all participants in the study. CCC was effective in increasing the spelling accuracy of 240 commonly used words. The researcher indicated that CCC procedure required little teacher time or training and was an overall success in a special education high school classroom setting.

Mann et. al (2010)

The study's aim was to examine the effects of teaching students to sound out (SO) their spelling words while writing them using the CCC method on their spelling accuracy. The participants in the current study were five elementary school students who attended a small nonprofit private school. All five students demonstrated spelling skills significantly below their reading level. The words chosen for this study were taken from a word bank from the students' current spelling book. A multi element design was used to compare the effects of no SO and SO on posttest spelling performance. Sessions occurred three to five times per week and were between 2 and 20 min long. They took place in either the student's regular classroom or in an empty classroom. Both settings contained items typically found in elementary school classrooms. There were three types of sessions: pretest, practice, and posttest. The first session for all students was a pretest. This was followed by a practice session on the same or the next day, a posttest session on the following day, and then the next pretest session. There were two practice conditions in the study : no SO and SO. Practice sessions were followed by no-SO and SO posttests, respectively. The dependent variable was the percentage of words spelled correctly on each posttest following a practice session. The dependent variable was the percentage of words spelled correctly on each

posttest following a practice session. A word was scored correct if it matched the spelling in the book. Data were collected through pre- post spelling tests. The results of the study indicated that For every student, posttest accuracy was higher following practice CCC with sounding out, indicating that it is an effective and easily implemented strategy to improve spelling instruction. Further, CCC with sounding out increased the accuracy of words previously misspelled on no-SO posttests.

Becker et. al (2009)

The main objective of this study was to increase the correct rate and decrease the error rate for see/write digits in multiplication using the CCC strategy. A second objective was to require an additional error correction procedure with CCC and evaluate its effects. The participant in the study was a 10-year - old female elementary student. The participant was assigned to the regular fourth grade classroom, but received special education services in the areas of math and reading. The study took place in the participant's resource room in an elementary school in the Pacific North West, USA. An ABC single case design was used to evaluate the effects of the two interventions on the rate of see-to-write multiplication facts. A non parametric analysis of variance procedures for both corrects and errors across each condition was carried out. After baseline, a CCC procedure was implemented. Finally, additional error drill was added to CCC procedure. The results of this study indicated the effectiveness of the CCC self-managed drill and practice procedure. The overall outcomes indicated a significant increase in corrects and a decrease in errors with CCC. When CCC was combined with error drill, corrects again improved and errors further declined. Fluency also improved with additional error drill. The evidence from the study indicated that CCC is an effective procedure. When additional error correction was employed, the efficacy of the procedure improved even further. The student also appeared to enjoy the daily routine of precision teaching when it was combined with CCC. Although, the

student had been absent a great deal prior to the experiment, she never missed a day during the intervention.

Erion et. al (2009)

The researchers carried out a study which was aimed at examining the effect of two versions of CCC and a baseline condition on the acquisition and retention of spelling words. At the core of such an intervention comparison is examining the effect of varying the number of times a participant copies a word following an error. In one condition of CCC the participant copied a word once following an error and in the other condition copied a word three times following an error. Three girls and one boy were selected as subjects. Two girls were 8-years-old and one was 7-years-old. The boy was 9-years-old. The girls were in 2nd grade and the boy was in 3rd grade . All of the students were identified by their classroom teachers as regularly earning below average or failing grades on weekly spelling tests. All of the participants were Caucasian and English was their primary language. Three elementary schools were represented. All were rural and had primarily white low to middle populations. The schools were located in western New York, northwestern Pennsylvania, and northeastern Ohio, USA. Spelling instruction was part of Language Arts instruction in all three schools. Prior classroom spelling instruction activities included pre-tests, alphabetizing words, copying words multiple times, and unscrambling words. The 90 words chosen for each participant were randomly divided into 18 sets of 5 words each. Six of these sets were assigned to the six CCC1 conditions, six to the six CCC3 conditions, and six to the six baseline conditions. An adaptive alternating treatments design with counterbalancing was used to compare the effects of two versions of CCC and baseline during acquisition and retention 2 weeks later. The dependent variable was the percentage of correct letter sequences for each session. Data were collected through pre-post tests spelling tests and retention spelling tests. Results obtained here are demonstrating the effectiveness of CCC for the

successful acquisition and retention of spelling words. During acquisition, performance in both versions of CCC was greater than that during baseline sessions.

Jasper (2009)

The primary goal of this study was to examine the impact of two spelling interventions on spelling acquisition, word reading, vocabulary development, and spelling maintenance. The first intervention, called CCC, involved having the participant look at a word, cover it, write it, and then compare the written response to the original stimulus. The second intervention (CCC+SD) included the CCC technique, but the experimenter also used the word in a sentence and provided a brief definition just before the participant engaged in the CCC technique of each word. Instructional time was held constant across conditions. The study was motivated by the following questions: 1) Which intervention is more effective for learning to spell, when controlling for efficiency (i.e., instructional time)? 2) How do these interventions differentially impact word spelling retention over time? Participants for this study were three first-grade African-American male students who participated in the Young Men's Christian Association (YMCA) after-school program at an urban elementary school in the Southeast, USA. Word lists were comprised of unknown words from Graham, Harris, and Loynachan (1993). The word list by Graham et al. was designed by examining four studies of the most frequently written words. An adapted alternating treatment design was used to measure participants' learning rate in the two conditions. Intervention data were collected across 16 consecutive school days during the participants' after-school program. Each day the participants first completed an assessment of the previous day's words (six words from each condition and the control list, with word order randomized across the three lists) and then participated in both interventions (CCC and CCC+SD). Conditions were presented in a counterbalanced order in order to control for sequencing effects. Thus, the order of interventions was counterbalanced so that the same intervention did

not always take place first or last (i.e., one day the CCC intervention was first, and the next day the CCC+SD was first). Sessions were conducted individually because each child had his own list of unknown words. Data were collected during all phases of the study: daily assessments, daily interventions, pretests, and posttests. Although, the participants in the study spelled no words correctly in each condition at the pretest, the post-test results indicated that both interventions increased the participants' spelling which was greater than a control condition. Because the rate of spelling words learned was equivalent across the two interventions, these interventions may be considered equally efficient methods of improving spelling accuracy.

Kosmac (2009)

The main focus of the study was to determine if class-wide implementation of CCC procedures would effectively increase spelling accuracy on written exams and whether results would generalize across tasks and maintain over time for 2nd grade participants within a rural public school. Specifically, goals were to 1) determine if CCC was effective in increasing spelling accuracy for second grade participants, as evidenced through weekly spelling tests, 2) to determine if improvements resulting from the CCC intervention would generalize across tasks by evaluating performance on words in the context of written sentences in addition to isolated words, 3) to determine if improvements resulting from the CCC intervention would generalize across time, verified through follow-up assessments, and 4) to determine if 2nd grade participants would choose to use the CCC procedures to study their spelling words, confirmed through monitoring of choices when allowing selection from several spelling strategies including CCC. The participants included 45, 2nd grade students, 6 to 8 years of age, in three classrooms. The number of participants was chosen based on the research design of the study, which required at least three classrooms. The setting was a rural, public school located within Southwestern Ohio, USA. There are approximately 580 students enrolled across kindergarten to 4th grade. A

multiple baseline across subjects design, with a phase to assess student choice and a maintenance follow-up, was used for this study. This design required the sequential, lagged application of the CCC instructional package across the 3 participating classrooms followed by the choice condition and follow-up assessments in each classroom. Data were collected through pre-post spelling test and a questionnaire for teachers of the targeted classes. Student preference, as a facet of social validity, was assessed by recording student choice of spelling strategies during the choice phase of the study. Actual choice was judged a more naturalistic and direct measure of intervention acceptability than a questionnaire, and supplies valuable data related to student acceptability, satisfaction, and perceived effectiveness. Results demonstrated the effectiveness of CCC for the successful acquisition and retention of spelling words. Students spelling performance improved and they were more likely to select CCC when given a choice of study strategies. Acceptability of the CCC procedures was documented for teachers through positive responses on a questionnaire. Aspects of social validity as assessed through teacher questionnaires indicated satisfaction with CCC procedures, ease of implementation in a classroom setting, and perceived benefit to students.

Moser (2009)

The basic emphasis of this study was to examine the effects of the CCC strategy on the acquisition, maintenance, and generalization of spelling sight words for elementary students with disabilities.

A secondary purpose of this study was to measure the effects of the CCC strategy on the correct letter sequences produced by students when spelling sight words. There were two dependent variables measured in this study: the number of words spelled correctly and the number of correct letter sequences. The study addressed the following questions: 1) What are the effects of the CCC strategy on the number of words spelled correctly? 2) What are the effects of the CCC

strategy on the number of correct letter sequences written within words? 3) Will students maintain the spelling of sight words? 4) Will students who use CCC generalize the correct spelling of sight words, as measured by spelling of those words in novel dictated sentences? 5) What are the students' opinions about the CCC strategy? 6) What are the teachers' opinions about the goals, procedures, and outcomes of the CCC strategy? The participants included were 6 students in grade one. The participants were chosen based on spelling achievement scores. The study took place in a suburban public elementary school located near Columbus, Ohio, USA. The school housed 450 students and 29 teachers. A multiple baseline single-subject design was used to determine the effectiveness of the CCC strategy to teach 9 or 18 unknown sight words. These sight words were selected based on results from spelling assessments completed by each participant. Specifically, words that each participant missed were put into individualized word sets of 3 or 6 words each. Students were taught to practice spelling these words using the CCC strategy. Maintenance measures were recorded one and 3 weeks after intervention ceased, and generalization was measured at least once per phase for each student. Results show that CCC was effective in the acquisition, maintenance, and generalization of sight words for all participants. Furthermore, results from student and teacher questionnaires indicated that CCC was a socially valid intervention.

Cates et. al (2006)

The central aim of the study was to assess the effects of a constant time delay (CTD) procedure and a CCC procedure on students' overall spelling acquisition rate, spelling maintenance, and adaptation of learned words to reading. The general steps for the CTD procedure are to (a) provide the target spelling word, (b) provide some constant time interval (e.g., 5 s) for a student to initiate a response, (c) if a correct response occurs, then provide some form of reinforcement and then move on to the next word, (d) if an incorrect response occurs, then provide some form

of practice and no reinforcement, and (e) if no response is provided, then provide a model for the student to copy one time correctly and provide no reinforcement. Three 3rd grade students in a regular education public school in the Midwest, USA served as participants in the study. All three students were males. All students were identified by their teachers as having difficulty in spelling as evidenced by weekly spelling test performance. Specifically, the students' spelling performance was below average for previous spelling tests during the quarter when the study took place. An alternating treatments design was used to evaluate the relative effectiveness and efficiency of the two intervention strategies. A list of 60 spelling words was used during the study. These words were obtained directly from the teacher and came from the students' respective general education curriculum. All words for each student were randomly assigned to either a CTD condition or a CCC condition. Each day of the study students were randomly presented with two trials of two lists of 10 words (i.e., both conditions). The duration of the study varied for each student and was determined by how rapidly the students acquired words. An alternating treatments design was used to evaluate the relative effectiveness and efficiency of the two intervention strategies. Results of the current study revealed that all of the third graders with spelling difficulties included in this study learned to spell more words under the CCC condition than in the CTD condition, supporting the use of the CCC strategy.

Nies & Belfiore(2006)

The primary goal of the study was to compare the effects of two spelling strategies (CCC and copy-only) used to enhance spelling performance. The CCC method required the students to say the word, point to the word, repeat the word, cover the word, print the word, compare the word to the correct model, and correct errors if necessary. The copy-only method required the students to say the word, point to the word, repeat the word, and print the word. The participants of this

study were 2, third-grade students with learning disabilities (one boy, one girl). Both students were identified as having a learning disability by the school district's special education department. To assess the effects of the CCC and copy-only strategies, an adaptive alternating treatment design was used. Spelling words used in this study were selected from the Trophies Harcourt Spelling 4th Grade (Harcourt, 2005) series. Each weekly word list contained a total of 12 spelling words, randomly divided into two sets of six words each. Three different 12-word spelling lists were used over three weeks, one list per week, so each word list represents one comparison of treatment per student. One set of six words was assigned to the copy-only spelling method, and the other set of 6 words was assigned to the CCC spelling method. Both students used the same word lists. A total of three word lists (36 total words) were used throughout this study, a new word list each week for three weeks. The data were obtained through pre and posttests. To assess student satisfaction with the two strategies a questionnaire adapted from Grskovic and Belfiore (1996) was used. The questionnaire had five statements for students to answer yes/no. The questionnaire was administered on the final day of the study. Overall, for both students in this study, the CCC strategy was more effective in total words learned and total words retained than the copy-only strategy. In addition, when analyzing the social validation surveys both students preferred the CCC strategy.

Conley et. al (2004)

The principal purpose of the study was to compare the CCC method to a picture-word matching method for teaching sight word recognition. The participants were 5 kindergarten students with less than preprimer sight word vocabularies who were enrolled in a public school in the Pacific Northwest, USA. None of the students had been diagnosed with any specific learning disabilities; however, they were selected for this study because of exhibited delays in reading ability based on teacher report. Teaching sessions took place in the hall outside the classroom.

Twenty-three words were presented to the students in four stimulus contexts: (a) words in isolation, (b) words in the context of a sentence, (c) words in the context of a sentence with a picture that matched the target word, and (d) words in the context of a sentence with a matching picture and three distracter pictures. Each student was taught individually for 15 min. A five-phase investigation used a multi element design in which different combinations of elements were presented across different stimulus conditions. To control for multiple treatment interference, the order in which each intervention strategy was used was selected randomly prior to the investigation. The dependent variable was the percentage of words read correctly. A word was counted as correct if the student read exactly what was written within 15 s of the word being presented. The data were gathered through pre- post achievement tests and retention tests. The results suggested that sight words taught using the CCC method resulted in better maintenance of word recognition when compared to the picture-matching intervention. CCC is a superior procedure for teaching word recognition skills. Specifically, the students correctly identified words in isolation an average of 96% of the time after being taught with the CCC method. More important, word recognition was maintained at 1-week follow-up. Conversely, when the picture-matching method was used and pictures were removed, each student began to misidentify words.

Skinner et. al (1993)

The main focus of this study was to evaluate the effects of a Cognitive CCC intervention on the division fact performance of three students in a self-contained classroom for students with behavioral disorders. For this version of the CCC intervention, students were trained to examine a division problem with the answer, cover up the answered problem, and then say the problem and answer to themselves (sub vocally). The students would then uncover the answered problem and self- evaluate their sub vocalizations from memory. The results found that two of the three students increased their rate of correct responding to the mastery level following the intervention.

In order for the third student to reach mastery level, feedback and goal setting were provided. Each of the three students maintained increased rates of correct responding to division facts eight months after the intervention took place.

Skinner & Belfiore(1992)

This study was designed to evaluate the effects of the CCC intervention in the academic domain of geography (specifically by working with students on identifying states on a United States map). The participants in the study were seven students with behavior disorders (social emotional disorders) in a self-contained classroom were administered the intervention. The students each received a map with the states correctly labeled, as well as a stack of index cards with the names of the states, a penny, and a map without the names of the states on it. After completing training on the CCC procedure, every morning for approximately five minutes, each student would work on the intervention. First, each student would turn over an index card and locate the state on the labeled map; then, the student would turn over the labeled map and place the penny on the same state on the unlabeled map. Finally, the student turned the labeled map back over and checked the response. The data for this study were collected through tests and questionnaires. The results of the study found that the intervention was effective in increasing the class mean accuracy level in identifying states. Furthermore, results of a student questionnaire found that students rated the CCC intervention as highly acceptable.

2. Studies Related to Self-Correction Strategy

Ruma et. al (2007)

The study aimed at investigating the effect of self correction strategy on spelling accuracy. The three students who were asked to participate in this study were two 16-year old students and one 18-year old student who were in the tenth and twelfth grades respectively. All students exhibited written expression skills at least three years below grade level placement. The intervention took place in a special education resource classroom in which the students were served on a daily basis. The classroom was designed for students with significant deficits in reading and writing performance. Spelling instruction in this classroom revolved around vocabulary words found in the textbook from which writing assignments were drawn in this classroom. Using an alternating treatments design, the effect of error self-correction was compared with a more traditional method of spelling practice. Such a design allowed for the two methods of spelling practice to be compared . The students were given 16 new words each week. All students practiced and were assessed over equated word lists under both conditions. They used the traditional repeated practice method (writing the word three times while viewing the correct spelling) for eight of the words and the error self-correction method (checking after each word for accurate performance) for the other eight. The first week, error self-correction was implemented first, but in subsequent weeks, the order of the treatments was alternated. The percentage of correctly spelled words was the dependent variable evaluated in all conditions. The independent variables were traditional repeated practice and error self-correction. The intervention and follow-up phases were implemented over a 6-week period with maintenance checks conducted 4 and 8 weeks after the termination of instruction. The data were obtained by weekly pre and post spelling tests, maintenance tests and questionnaires. The results of the study All three high school students in

this study indicated improved performance using the error self-correction procedure. The percentage of words spelled correctly using this method was higher than the percentage of words spelled correctly when traditional repeated practice was utilized to practice spelling. Maintenance probes conducted at 4 and 8 weeks following the termination of the intervention rather than weekly maintenance tests provided a better picture of the effects of error self-correction over a longer term. The results of social validity questionnaires indicated that the teacher felt that he would be more likely to use the error self-correction strategy in the future, and that he would be more likely to share the error self correction strategy with other teachers. The teacher also indicated that he believed the students learned more using the error self-correction strategy.

Gomez & Belfiore(2000)

The research was conducted in an attempt to examine the effects of an error correction strategy on the spelling accuracy of words by elementary school students. The second purpose was to compare the effectiveness of self correction with traditional method. In the error correction strategy students wrote the word, viewed an accurate model of the word, and self corrected any errors. In the traditional strategy students wrote each word three times on a paper after viewing an accurate model. Two boys and one girl, attending a third grade classroom in a large urban elementary school, participated in the study. Reading Series for third grade served as the source for all spelling words. Tests were administered 5 days a week (Monday–Friday). The Monday test served as a 1day pretest. The rest of the week served as next day tests. The dependent measure was the number of words written correctly on the daily tests across the two instructional conditions. An alternating treatment design was used to assess the effects of the error correction and traditional strategies across four word lists. Each week one half of the students spelling words were practiced with error correction (six words) and one half with the traditional method

(six words). The presentation order of the interventions was counterbalanced across sessions. The results showed that students spelled more words correctly under the error correction strategy than the traditional one.

Spaine (1999)

Spines' study aimed at determining the effects of a traditional spelling approach versus the self-correction approach. It examined the effects of each approach in the acquisition, maintenance, and generalization of correct spelling performance. The traditional approach involved completing a number of spelling tasks daily: writing the words three times each, writing the words into sentences, putting the words into alphabetical order and writing the words into a story. The self-correction approach, which employs self management as a learning strategy, required the students to write a list of dictated words then to compare their response to a teacher prepared key. The students then made the appropriate corrections using four proofreading marks where discrepancies existed between their spelling of a word and the correct spelling found on the key. The study addressed the following questions: 1) Will students correctly spell more words on weekly spelling tests after instruction using the traditional or self – correction approach? 2) Which strategy, traditional or self- correction, will result in more accurate spelling of instructed words in a generalized writing assessment? 3) Which strategy, traditional or self – correction, will help students maintain the correct spelling of words over time? 4) Which strategy, traditional or self-correction, do the students and teacher prefer? The participants in this study were five children who range in age, 8.7 - 10.3 years who have been identified as having difficulty in the area of written language or have poor grades in spelling tests. The study was conducted in suburban which is a part of Hilliard City School. The number of words learned and spelled correctly from a list of previously unlearned words is the dependent variable. The independent variables are the traditional approach and the self-correction approach. The

alternating treatment design was used because this design could demonstrate most accurately the comparison between two independent variables. Data were obtained through pre spelling tests, weekly tests and maintenance tests. Social validity of this study was measured by asking the teacher which method she preferred and felt benefited the students' learning of the spelling words and maintaining expertise of the correct spelling over time. The students were also questioned as to which method helped them learn the correct spelling and which method they preferred. The final results of this study were that the participants learned a total of 190 words out of a total of 240 total words during the traditional method. The five participants in the study learned a total of 251 out of 290 words during the self-correction method. This means that the students learned 79.1% of the traditional spelling words compared to 86.5% of the self-correction words. On the delayed post-tests, students scored higher percentages of words learned during the self correction method than during the traditional method. In addition, when analyzing the social validation surveys, four of the five students agreed that they prefer the self correction method of instruction to that of the traditional one. The classroom teacher preferred the self correction method to that of the traditional method of instruction. She felt that the students benefited from the consistent analysis of mistakes during the self correction method of instruction.

McGuffin et. al (1997)

The study examined the effect of self-correction versus a traditional spelling approach on the acquisition and maintenance of written spelling of elementary school students enrolled in third grade. The self-correction-whole word method consisted of students comparing their written responses to a correct model and correcting their spelling, if necessary. The traditional spelling method consisted of students writing each spelling word five times, using a pre-written model as a guide. Six third-grade general education students (two boys and four girls) participated in study. They were considered at risk for academic failure and were selected for the study by their

teacher due to poor spelling ability and performance. The study took place in an inner city elementary school . Students practiced their spelling words following study procedures in a separate class- room in the building. They completed spelling tests and maintenance probes in their general education classroom during regularly scheduled spelling test times. Two independent variables were compared (self-correction-whole word and traditional spelling methods). The primary dependent variable was the number of words spelled correctly on weekly posttests (i.e., regular spelling tests conducted weekly in the students' regular classroom). The number of words spelled correctly on maintenance probes constituted a second dependent variable. An alternating treatments design was used to analyze the effects of the independent variables on weekly posttest and maintenance probe scores. Self-correction and traditional spelling methods alternated in a randomly determined sequence across a 12-week period, such that each condition occurred six times. The random sequence was determined by flipping a coin, with the condition that no more than three continuous weeks consisted of practice with the same spelling method. Data were gathered through pre-post spelling tests and maintenance tests. The experimenter provided social validity questionnaires to students following the 11th week of the study. Students responded to questions concerning their preference for spelling methods and the perceived effectiveness. The results of this study confirmed the effectiveness of the self-correction-whole word spelling procedure used for the students who participated in this study. Self -correction resulted in improved spelling performance and a higher degree of spelling maintenance relative to the traditional method. The results of the social validity questionnaires indicated that all students preferred self-correction over the traditional spelling method. In general, they reported that the self-correction method was more fun and less boring than the traditional spelling approach. All six students reported that they perceived that the self-correction method helped them to learn their spelling words more effectively.

Okyere et. al (1997)

The researcher's aim was to examine the effect of self-correction on the acquisition, maintenance, and generalization of written spelling of elementary school students attending an after-school clinic. Six elementary school children, one male and five females, ages 7 to 13 years old served as subjects. The spelling skills of the students were below the fiftieth percentile and they had registered for remedial tutoring at a University based clinic. They were selected randomly from a pool of students registered as waiting list applicants to the Clinic because they exhibited spelling and written language deficits. The study was conducted at a Psycho educational Clinic on a university campus. The dependent variables were written spelling accuracy on weekly spelling posttests, delayed posttests, generalization spelling scores, and social validity. Also, the *Test of Written Spelling-2* (TWS-2) (Larsen & Hammill, 1986) was administered as a pre- and posttest measure to determine overall spelling achievement. Data were obtained through pre-post spelling achievement tests. Also, after the 14th week of the intervention, and as an additional index of the effectiveness of the intervention, questionnaires on the social validity of the study were administered to the students, their classroom teachers, and their parents. Through interviewing, the students responded to questions such as: (a) did the self-correction method help you to improve your spelling?, (b) to what extent did the self-correction method help you to improve your spelling?, and (c) would you like to use the self-correction method to help you study spelling on your own in the future? Their parents and teachers responded to the following questionnaire items and returned the questionnaires to the experimenter by mail: (a) did you notice that (student's name) spelled more words correctly in his written work during the past weeks?, (b) was there any change in (student's name) spelling performance?, (c) did you notice any change in (student's name) attitude toward school work in general during the past weeks?, and (d) did the student correctly spell the words he learned in

other subjects (i.e., social studies, science, and written expression)? This study employed a delayed multiple baseline across word lists. In this design, baseline data across tiers were delayed until approximately two sessions before self-correction was to begin. Self-correction was introduced systematically and sequentially across word lists. Results showed a functional effect between self-correction and improved student performance on target words. Using the self-correction procedure, the students spelled at least 98% of the target words accurately, maintained at least 85% of the correctly spelled words, and generalized at least 70% of the words at home, in context, and with word variations. Questionnaires were administered to the students, their parents, and teachers indicated that students preferred self-correction. Parents noticed academic improvements in their child's spelling performance as well as positive changes in attitude toward school. Teacher responses were mixed. Whereas some teachers noticed changes in the number of words spelled correctly, student attitude, or generalized performance, other teachers did not report noticing changes in performance.

Grskovic& Belfiore (1996)

The present study examined the effects of an error correction strategy on the spelling accuracy of students. The strategy, which asked students to spell a word, view a correct model, and then correct their errors, was compared to a traditional strategy that asked students to write words three times each while viewing a correct model. Students had equal opportunities to view stimulus words and respond actively in both conditions. Three boys and two girls, attending a primary, self-contained class participated in this study. Four of the students were enrolled in the fifth grade and one was a fourth grader. For all participants, full-scale IQ scores, as reported by the special education teacher, were within the average range. Instruction was provided four times per week and began immediately after the first-day- or next-day tests. An alternating treatments design was used to assess the effects of error correction on the spelling accuracy of students.

Each week, half of the students' spelling words were taught with error correction and half with the traditional method of writing them three times each while looking at a correct model. The presentation order of the conditions was counterbalanced across sessions. The number of words written correctly on the first-day test and next day tests served as dependent measures. Data were collected through pre-posts achievement tests. To assess students' satisfaction with the error correction procedure, a questionnaire was administered on the last day of the study asking students how much they agreed with five statements. The results showed that students spelled more words correctly under the error correction strategy than the traditional approach. The results of the social validity questionnaires indicated that all students preferred self correction strategy over the quicker method of writing the words three times each (traditional method).

Zakiah (1996)

This study compared the effects and determine which of the two methods of instruction, self-correction or traditional, was more effective in terms of the improvement of spelling performance. The self-correction method included two major components: (a) error imitation and correction and (b) repeated practices to mastery. The traditional method used spelling words in a variety of ways, which included activities such as: writing each spelling word five times, putting each word in alphabetical order, defining each word, and using words in context (sentence form). The study addressed the following questions: 1) Did students spell more words correctly under a self correction or a traditional spelling approach? 2) Did students correctly recognize more words taught under traditional or self correction conditions on bi-weekly recognition tests? 3) Did students generalize more words learned under traditional or self correction spelling approach? 4) Did students prefer self correction or the traditional approach? 5) Did the regular education teacher prefer self correction or the traditional approach? Three male elementary students in the Midwest, USA, participated in the experiment. The spelling performances included learning to

spell a word and transferring that knowledge to other subjects in written form. Students' scores of weekly, bi-weekly recognition posttest and generality measures were compared. An alternating treatment design was used for this study. Data were obtained through pre -tests, weekly tests, Bi-weekly recognition tests and Generality probe. Questionnaires were also administered to the students and their regular education classroom teacher in order to evaluate the social validity of the experiment. Results of weekly posttest indicated that the self correction method was more effective in improving the spelling performance of two out of three students. Two participants learned more words during the self-correction method while one participant learned one more word in weekly posttest of the traditional condition. Two out of three students generalized an average of one more word in the self-correction, while one student generalized one more word in the traditional condition. The results of the social validity questionnaires indicated that all the three students preferred the self correction approach. They felt that the self correction approach helped them get better at spelling. The regular education teacher also preferred the self correction approach over the traditional approach.

McNeish et. al (1992)

The main focus of this study was to compare the effects of Self-Correction and Traditional spelling on the acquisition, maintenance, and generalization of spelling words. The participants of the study were five junior high school students with learning disabilities. During Traditional spelling students received a weekly list of 20 unknown words. Daily 20-minute assignments with these words varied among writing them, arranging them in alphabetical order, dividing the words into syllables, and using a dictionary to locate word meaning. Students were tested on the 20 words at the end of the week. During Self-Correction, students received 20 words on a 5-column sheet of paper. Columns were arranged so that stimulus words could be hidden by folding the paper back, and later exposed after the teacher dictated and the student wrote the words. Students

used proofreading marks to self-correct. Sessions lasted 20 minutes, and weekly, delayed, and generalized assessments were conducted. Results indicated that for all five students the Self-Correction procedure was more effective for word acquisition than Traditional spelling. Also, for four of the five students, maintenance of words was higher under Self-Correction. Generalization occurred for three students. Finally, measures of social validity indicated that the students preferred Self-Correction over Traditional spelling, although two teachers in regular classrooms did not notice significant changes in the overall spelling performance for the students. Implications for the classroom practitioner are discussed.

Wirtz (1992)

The study compared the traditional approach for teaching spelling with the self correction strategy. It sought to determine which strategy results in better acquisition, maintenance, and generalization of correct spelling performance. Traditional approach involves completing a different task each day such as writing the spelling words a number of time, using the words in sentences and compositions, and alphabetizing the words. Self-correction spelling approach employs self management as a learning strategy. The following research questions were addressed in this study: 1) Will students correctly spell more words on weekly spelling tests after traditional or self correction approach? 2) Which instructional strategy (traditional or self correction) will result in more correct spelling in a generalization setting? 3) Which instructional strategy (traditional or self correction) will help students maintain the correct spelling over time? 4) Which instructional strategy (traditional or self correction) do students prefer? The participants of the study were six third grade students, three males and three females ranged in age from 8 to 10. The children have experienced difficulty with spelling. The study took place in an urban elementary school which is a part of the Midwestern school system, USA. The

alternating treatments design was used in this study .It was chosen because it demonstrates the comparison between two independent variables. It offers the advantage of minimizing sequence effects. The dependent variable in the study is the number of spelling words learned from a list of previously unlearned words. The independent variables are the traditional and self correction strategies. Data were collected through pre post spelling tests and delayed post spelling tests. To evaluate the social validity of the study, students were asked to complete a questionnaire. The results of the study showed that all six students spelled more words correctly after self correction than after traditional instruction. Each student except one, correctly spelled more words learned under self correction than traditional spelling on the delayed posttests. All six students preferred self correction method over the traditional method.

Okyere (1990)

The researcher conducted a study in order to examine the effects of self correction procedures on the spelling performance. Specifically, the study determined whether self correction would improve spelling in isolation and spelling in context. Also, the study examined whether the use of self correction affected the spelling of the variations of words that the students learned. The study was motivated by these questions: 1) Did a self correction procedure on spelling assignments affect the accurate performance of elementary students' spelling? 2) Did self correction have a differential effect on student spelling performance of words in isolation and words in context? 3) Did self correction during spelling acquisition affect the students' ability to spell varied forms of words? 4) Did self correction improve the students' overall spelling performance on pre and post normative tests? 5) Did the students recognize a change in their spelling skill and did their teachers and parents also think so? 6) Did the students prefer self correction over other spelling procedures they have experience in the past? Six elementary

students in Ohio, USA, one male and five females, ages 7 to 13 years old whose spelling skills were below the 50th percentile served as participants for the study. The study was conducted in a delayed multiple baseline fashion. The dependent variables in the study were the percentage or the number of words spelled correctly in isolation on written spelling session tests, and in sentences. Also delayed posttest scores were obtained to determine maintenance of words learned, and correct spelling of variations of the target words. Data were obtained through pre-post achievement tests, retention tests and questionnaires. Results indicated that self correction had a functional effect on the correct spelling of the target words for the students. When self correction was introduced across word lists, students' performance improved. The students were able to spell at least 93% of the target words using self correction procedures. Also, the students maintained 80 % of the target words spelled correctly. Questionnaires administered to the students, their parents, and teachers indicated that students preferred self-correction. Parents noticed academic improvements in their child's spelling performance as well as positive changes in attitude toward school.

McGuffin (1985)

The basic purpose of the study was to compare the effects of a self correction versus a traditional approach in teaching spelling on the spelling performance. Specifically, the study determined whether self correction spelling procedure would differentially affect the spelling scores on weekly tests as compared with a traditional spelling approach that involved students simply writing target words repeatedly. The two approaches were measured in terms of the percentage and number of words spelled correctly during weekly posttests. In addition, the percentage and number of words spelled correctly on delayed posttests scores were obtained to determine the degree of maintenance of words learned under each conditions. Finally, generalization data were analyzed to identify any differences in students' abilities to transfer the

spelling skills learned to written work other than spelling tests. The following questions were addressed in this study: 1) Is there a functional relationship between students self correction and a traditional during daily spelling practice and written spelling performance? 2) Will students self correction of spelling errors differentially affect spelling scores on weekly and delayed posttests (maintenance) relative to traditional spelling approach? 3) Will the practice of self correction improve the students' overall spelling performance as measured by pre and posttests? 4) Do students have a preference for either self correction or traditional approach to spelling? Six third grade students, two males and four females served as participants in this study. Students were selected for this study by their classroom teacher based on poor spelling ability or motivation. This study took place in an inner -city elementary school classroom in central Ohio, USA. An alternating treatments design was chosen for this experiment to analyze the effects of two distinct conditions of instruction (self correction and traditional spelling) on the acquisition of spelling words. Data, for this study, were obtained through pre-post spelling achievement tests, maintenance tests and questionnaires. Results indicated that self correction approach was more effective than a traditional approach in that students learned to spell more words correctly during the self correction procedures as compared to the traditional spelling procedures. Five of the six students maintained a higher number of words learned under the self correction method as well. Significant gains were made in both areas of spelling performance when self correction procedures were used relative to traditional spelling procedures. All six students indicated that they preferred self correction over traditional spelling procedures. The general education classroom teacher also noted a more positive attitude about spelling and writing in general from the students who practiced self correction procedures.

McNeish (1985)

The primary emphasis of the study was to compare the effects of a self-correction versus a traditional spelling approach on the acquisition, maintenance and generalization of words of middle school –age learning disabled students. These questions were addressed in this study: 1) Is there a functional relationship between self correction on daily spelling assignments and spelling performance? 2) Will student self correction of spelling errors positively affect spelling scores on weekly posttests (acquisition), delayed posttests (maintenance), and written spelling assignments in other subjects in school (generalization)? 3) Is one spelling instruction procedure-traditional spelling or self correction more effective than the other? 4) Will the practice of self-correction improve the students' overall performance as measured by pre -and posttests? 5) Do students have a performance for either self correction or a traditional spelling approach? 6) Will students' gains on a standardized test show growth over and above normal expectations ? The participants of the study were five seventh grade students, two males and three females, ages 13.8 – 14.11 years old. The study was conducted in a small, rural school in central Ohio, USA. The school containing 320 students. The multi-element design was used in this study. Data were collected through pre - post achievement tests, maintenance tests and questionnaires. The results of the study indicated that self-correction approach was more effective than a traditional approach in that students learned to spell more words correctly during self correction as compared to traditional spelling. For four of the five students, maintenance of words learned during self correction also improved. All students correctly spelled more self correction words than traditional spelling words in written work during the study. All five students indicated that they preferred self correction as opposed to traditional spelling. Four of the students said that self correction helped them to learn their words better.

3. Studies Related to Immediate Self Correction

Alber&Walshe (2004)

The central objective of the study was to examine the comparative effects of self-correction after attempting each word and self-correction after attempting a list of 10 words. This investigation was designed to answer the following research questions: Which method of self-correction, after attempting each of 10 words or after attempting a list of 10 words, will produce better effects on (a) acquisition of new spelling words as measured by end-of-the-week tests, (b) and maintenance of spelling words as measured by 1-week maintenance tests? Additionally, the investigation examined the students' opinions of each self-correction procedure. Six fifth grade boys identified as having learning disabilities or attention deficit disorder participated in this investigation. The students ranged in age from 10-6 to 11-2 years old. These students were selected to participate because their spelling skills were well below grade level. All six students received spelling instruction in their special education resource room because they were unable to attain passing spelling grades in their regular classroom. This investigation was conducted for nine weeks in an urban school system in Georgia, USA. Weekly lists of 20 unknown words were selected by pre-testing the students with words from the McDougal Littell Spelling series (Bohen, 1990), the same spelling textbook used in the students' regular fifth grade classroom. Words spelled incorrectly on dictation pretests by all 6 students were selected for the following week's spelling list. Each week, the special education teacher divided the 20 selected words into two lists of 10. The students' fifth grade teacher and another special education teacher examined the lists to determine that each word on the first list had a corresponding word on the second list with the same phonetic pattern, irregularity, consonant blend, digraph, or diphthong, and the same number of syllables. Once the lists were compiled and examined, they were randomly assigned to each of the two conditions. An alternating treatments design was used to compare the effects

of the two self-correction procedures on each student's spelling performance. The students were given 20 unknown spelling words each week. They used the self-correction-after-each-word procedure for practice of 10 of the words and the self-correction-after-the-whole-list procedure for practice of the other 10 words. Data were collected through Weekly Dictation Tests and One-Week Maintenance Dictation Tests. To assess social validity, the special education teacher prepared a brief survey that listed the following questions: "Which procedure did you like best? Why?" and "Which procedure do you feel helped you learn your words better? Why?". Two dependent variables were measured for each student: (a) the number of words spelled accurately on weekly dictation tests, and (b) the number of words spelled accurately on 1-week maintenance dictation tests. The results of the current study showed that self-correction after each word to be more effective for (a) acquisition of new spelling words as measured by weekly spelling tests for five of the six students, and (b) maintenance of spelling words as measured by 1-week maintenance tests for all six students. The students acquired and maintained higher percentage of words when self-correcting after each word as opposed to self-correcting after a list of 10 words. In addition, when analyzing the social validation surveys, students preferred the self-correction after attempting each word over self-correction after attempting a list of 10 words.

Morton et. al (1998)

The study compared the effects of two self-correction procedures (self correction after each word / self correction after ten words) on the spelling performance of elementary school students with learning disabilities. Five 11- to 12- year-old students, 3 males and 2 females, were recommended for the study by their special education teacher because they performed below average on spelling tests and frequently misspelled words on writing assignments. The study was conducted in a self-contained classroom for students with learning disabilities in a Midwestern

urban school system, USA. An alternating treatments design was used to compare the effects of the two self-correction procedures on each student's spelling performance. Weekly lists of 20 unknown words were developed by protesting the students with words from McDougal Littel Spelling, the series used by the classroom teacher. Words spelled incorrectly on the pretest by all 5 students were selected for the next week's list. The experimenter divided each weeks' words into two lists of 10, checking to ensure that each list contained words of equal number of letters, equal number of syllables, and words from the same lessons in the spelling text. The students used the self-correction-after-each-word procedure for 10 of the words and the self-correction-after-10-words procedure for the other 10 words. On two of each week's four practice days, the students used the self-correction-after-each-word procedure first; on the other two days the students used the self-correction-after-10 words procedure first. Two dependent variables were measured for each student: number of words spelled correctly on weekly tests and number of words spelled correctly on 1-week maintenance tests. Data were collected through pre-posttests and maintenance tests. The students also responded to a 2-item questionnaire that asked: Which method of practicing your weekly spelling words did you like best and why? and Which method of practicing your weekly spelling words do you feel helped you learn your words better? The results of the study reveled that on the weekly spelling tests, all 5 students in this study spelled more of the words correctly that they had practiced during the week with self-correction- after-attempting-each-word than they did words they had practiced with self-correction after attempting a list of 10 words. Self-correction-after-each word also produced higher scores on 1-week maintenance tests for 4 of 5 students. Questionnaires administered to the students indicated that students preferred self-correction procedures after each word over self correction procedures after ten words.

Morton (1996)

This study evaluated the effects of two spelling self-correction strategies (self correction after each word / self correction after ten words) on the acquisition, maintenance, and generalization of words. This study was designed to obtain objective data in response to the following question:

1) Does self correction after attempting each of ten words and self correction after attempting a series of ten words have deferential effects on students' maintenance of previously studied spelling words as measured by 1-week maintenance tests? 3) Does self correction after attempting each of ten words and self correction after attempting a series of ten words have deferential effects on students' use and accurate spelling of previously studied spelling words in written composition assignments? Additionally, the students and the classroom teacher's opinions regarding the self correction procedures were obtained. Five students, three males and two females, served as subjects. These students were recommended by their teachers because they performed below average 70% on spelling tests and frequently misspelled words in writing assignments. The study took place in a self-contained elementary classroom for students identified with learning disabilities in Midwestern urban school, USA. The students practice weekly list of 20 spelling words using two self correction procedures. Ten spelling words (half of the weekly list) were practiced by self - correcting after each word was dictated. The other half of each week's spelling list as self-corrected after the student heard and attempted all ten words. The unknown words were derived from the series that was currently being used in the classroom. The words were divided into two lists of 10, checking to ensure that each list contained words of equal number of letters, equal number of syllables, and words from the same lessons in the spelling text. An alternating treatments design was chosen for this experiment. This design was chosen because it provides both an experimentally sound and an efficient method for comparing two or more treatments. Data were gathered through pre-post achievement tests, weekly spelling

tests and maintenance tests. The results revealed that more words were spelled correctly that were practiced self-correcting after attempting each word. Four of the five students maintained more words that were practiced using the self-correcting after every word procedure, on the 1-week maintenance tests. Four of the five students indicated that they preferred the self correction after every word procedure. They felt that they learned more words during self correction after every word. The teacher did not state a preference for either procedure. She did write that she would implement both procedures with future students.

Barbetta (1994)

The main goal of the study was to compare the effects of immediate and delayed error correction during sight-word instruction with. Whole-word error correction immediately followed each error for words in the immediate condition. In the delayed condition, whole-word error correction was provided at the end of each session's three practice rounds. The participants in this study were four students (1 male and 3 female), aged 7 to 9 years, enrolled in a self-contained class for students with developmental disabilities. An alternating treatments design was used to compare the effects of the two error-correction procedures on the percentage of words read correctly during instruction, the number of words read correctly on same- and next-day tests, and the percentage of learned words read correctly on 1- and 2-week maintenance tests. Individualized pre testing was conducted each week to create a new set of 14 unknown words (printed on 3 in. by 5 in. index cards and randomly assigned to immediate or delayed error correction). One-to-one instructional sessions on each word set were conducted 4 days per week. Each 10- to 12-min session consisted of (a) a teacher presentation of words (on the 1st day of instruction per set) or a next-day test, (b) three practice trial rounds with error correction (with words shuffled between rounds), and (c) a same-day test approximately 3 hr after instruction. The results of the study revealed that immediate error correction produced better performances

than did delayed error correction on all dependent variables by all students. Immediate error correction produced higher same-day test scores and higher scores on next-day tests. All 4 students maintained more immediate than delayed error-correction words on 1-week maintenance tests, and on 2-week maintenance tests.

Commentary on the Previous Studies

Based on the findings of the twenty - eight studies, it becomes clear that there is a direct relationship between improving spelling skills and the use of CCC strategy or any of its main components (error self correction / immediate error self correction).

Having reviewed the twenty-eight studies, the researcher could conclude that all the studies have similar characteristics in many aspects as follow:

A. Findings

- 1- All the discussed studies agreed that, spelling is an important skill and a difficult one to acquire at the same time.
- 2- All the studies indicated that the traditional approach for teaching spelling, which is widely used in classrooms today, is ineffective and there is an urgent need to try other methods and strategies.
- 3- Twelve out of the twenty-eight studies stressed the use of CCC as an efficient strategy for improving spelling skills. In addition, both students and teachers indicated that CCC is a socially valid intervention.
- 4- Twelve of the studies' results confirmed the effectiveness of error self correction method in teaching spelling and that students spelled and maintained more words under the error self correction than a traditional approach. Moreover, students and teachers alike preferred to use this method.

5- Four out of the twenty-eight studies suggested using immediate error self correction in teaching spelling since it produces better performances than delayed error self correction does. Students and teachers also preferred immediate error self correction procedures over delayed error self correction ones.

B- Methodology

1- Nine of the previous studies used A Multi Element Design.

2- Three studies tried An Adaptive Treatments Design.

3- Fifteen studies employed An alternating treatments design.

4- One study implemented A Single Case Design.

The current study applied pre and post test control group design.

C- Tools

Different tools were used in the studies to obtain the needed data. The most repeated tools were six:

1- Per - post and retention test

2- Teachers, students, parents survey

3- Card analysis

4- Interview

5- Portfolio

6- Observation

The present study used two tools: Spelling achievement test and a social validity questionnaire.

D- Samples

Samples chosen for the studies were different in number, age, and gender. However, it is worth to mention the following facts:

1- Forty-five served as participants for the largest sample of all the studies (Kosmac 2009).

2- The smallest sample number was one elementary female student (Becker et. al 2009).

3-The participants chosen in the studies were kindergarten, elementary, preparatory and high school students.

In the current study, the sample is 60 ninth grade male students.

E- Place

Some researchers in the studies did not mention the country in which the study took place. They only indicated the city or the district. There were ten studies of this kind. All the rest of the studies (eighteen studies) were conducted in USA.

This present study was carried out in Palestine, Gaza-the Middle Governorate.

F - Statistical treatments

Various statistical treatments were used in the previous studies. It is worth to mention the following:

1. Paired sample t-test
2. Unpaired sample t-test
3. ANOVA
4. Chi-square

In this study, the researcher used Independent-Samples T-test to compare the means of two independent groups (the control and the experimental groups), "Paired-Samples T-test" to compare two groups that are related to each other (pre and post-test) .

G - Benefits gained from the previous studies

It is worth admitting that the previous studies were very beneficial to the researcher in conducting this study as they:

1. enriched the knowledge of the researcher concerning the different methods that are used in teaching spelling. Especially, those methods that have been shown to be effective,

2. guided the researcher in designing the current study, and
3. helped the researcher in selecting the tools needed to collect data of the study.

H- Significance of this study

Two main characteristics distinguish the current study:

- 1- It is the first study of its kind in Palestine that aimed to investigate the effect of CCC strategy for teaching spelling on spelling performance.
- 2- The study includes a large number of participants (60 male students) compared with all the previous studies. The largest number of participants in the previous studies, as mentioned earlier, were 45 participants which was in Kosmac's (2009) study.

Summary

Chapter two was divided into two sections: theoretical framework and previous studies . The first section introduced literature related to spelling instruction. The second one discussed previous studies related to CCC strategy for teaching spelling and its effect on improving spelling performance.

The first section (theoretical framework) was divided into four main domains as follows:

- importance of spelling
- difficulty of English spelling
- spelling instruction
- major approaches to teaching spelling

The second section (previous studies) had three main domains and included twenty-eight studies sequenced thematically as follow:

- studies related to CCC strategy
- studies related to self correction technique
- studies related to immediate self correction technique

Chapter III

Methodology

Chapter III

Research Methodology and Design

Introduction

This chapter contains the procedures followed throughout the study. It introduces a complete description of methodology of the study, sample of the study, instrumentations of the study, pilot study, a description of CCC strategy used in the study and the research design. Moreover, it presents the statistical treatments used in the study.

1. Procedures of the Study

The study is progressing according to the following steps:

- 1- Review literature and previous studies related to spelling, spelling instruction and CCC strategy for teaching spelling.
- 2- Decide on instruments of the study: pre-post spelling achievement test, retention test, and a questionnaire to investigate the participants' attitudes towards the CCC strategy.
- 3- Design a spelling achievement test to be used as pre- post test and retention test. To decide the suitability of the test, it was introduced the test to specialists, including professors of teaching methodology, supervisors of English language, and experienced teachers who have long experience in teaching ninth graders.
- 4- Examine the appropriateness of the test items as well as their validity and reliability through the following:
 - a- Consult the specialists.
 - b- Apply the test on a random sample of (30) grade nine male students from the same school Deir El Balah Prep. "B" Boys' School. The results were recorded and statistically analyzed to estimate the validity and the reliability of the test. The necessary modifications were made in the light of the

statistic of result. The clarity of the rubrics and questions was also checked. The misleading items were also modified.

c- Find out the internal consistency coefficient using "Pearson formula".

d- Estimate the reliability using Alpha "Cronbach formula".

e- Identify the difficulties and the discriminations of the test.

5- Design a social validity questionnaire to ensure that the intervention procedures were accepted, and to determine the significance and importance of the changes in participants' behavior.

6- Check the appropriateness of the questionnaire items as well as their validity and reliability.

7- Apply the pre-test to measure the participants' achievement in spelling as well as to guarantee equivalence between the experimental and control groups.

8- Train the participants of the experimental group in their classroom by their teacher (the researcher) on how to use CCC strategy. This training lasted for 30 minutes and took place a day before implementing the experiment.

9- Implement the experiment using CCC strategy in teaching spelling to the experimental group and the traditional method in teaching spelling to control group.

10 - Apply the post-test on the sample of the study.

11- Analyze and interpret the results.

12- Apply the retention test on the two groups of the study.

13- Analyze and interpret the results.

14- Apply the social validity questionnaire on the experimental group.

15- Analyze and interpret the results.

16 - Present suggestions and recommendation in the light of the findings of the study.

2. Types of Research Design

The study attempted the experimental approach where there were two groups of ninth graders; an experimental group and a control group. To investigate the effect of using CCC strategy for teaching spelling on ninth graders' acquisition and retention of spelling, the researcher used a pre / posttest control group design. CCC strategy was used in teaching the students of the experimental group while the traditional method was used with the control group's students.

3. Sample of the Study

The sample of the study consisted of (60) nine grade male students distributed into two groups; an experimental group and a control group. Both groups have (30) students each. The groups were randomly chosen from a purposive sample from Deir El Balah Prep. "B" Boys' School that is an UNRWA school located in the Middle Governorate in the Gaza Strip where the researcher works as an English teacher. Table (1) shows the distribution of the sample.

Table (1)

The Distribution of the Sample According to the Groups

Group	Experimental	Control
Count	30	30

The participants were equivalent in the economic, cultural and social level. They were also equivalent in their general achievement in accordance with the statistical treatment of their results in the first term of the school year (2010/2011). They were similar in their English language achievement in accordance with the statistical treatment of their results in the first term exam of the school year (2010/2011). Age variable of the sample was also controlled before the experimental application.

4. Instrumentations of the Study

To achieve the aims of the study, the researcher used the following tools:

a - Achievement test

b - Social validity questionnaire

4.1 Achievement Test

The test was prepared by the researcher to measure the participants' achievement in spelling. The test consisted of 42 words. The words were chosen from *English For Palestine 9*, exactly from units 9 and 10, the units that were covered so far in the second semester of the scholastic year (2010/2011). The test was designed to reflect the students' ability both to spell words in isolation and in context. It was used as a pre test applied before the experiment, a post test applied after the experiment and a retention test applied a month after the post test.

Appendix (1)

4.1.1 Sources of Constructing the Test

The researcher constructed the spelling achievement test depending on some resources such as: the spelling activities in *English For Palestine 9* (Student's Book and Workbook), his own experience as a teacher of English language for more than 10 years, the review of literature, English language supervisors and expert teachers' opinions.

4.1.2 General Aims of the Test

a- To measure the effect of using CCC strategy on the participants' achievement in spelling.

b- To investigate the participants' weakness and strengths in spelling.

c- To identify spelling ability of the participants in the experimental and control groups before and after the experiment.

d- To measure the participants' retention of the correct spelling a month after the experiment.

4.1.3 Specific Objectives of the Test

The test was designed to examine the participants' ability to:

- a - write the correct spelling of the words they hear both in isolation and in context,
- b- choose the correct spelling of the word they hear among three or four other words,
- c - correct the spelling of underlined words,
- d- complete the words with the missing vowel letters, and
- e - unscramble the words they hear.

4.1.4 Items of the Test

The items of the test fell into seven categories:

- a - Write the word you hear. (6 words)
- b - Underline the correct spelling to fill in the missing words. (6 words)
- c - Complete the words with the missing vowel letters. (6 words)
- d - Unscramble the words you hear. (5 words)
- e - Complete the sentences with the words you hear. (7 words)
- f - Choose the correct spelling of the words you hear. (6 words)
- g - Write the correct spelling of the underlined misspelled words. (6 words)

4.1.5 Instructions of the Test (for participants)

The instructions were given to the participants by their teacher (the researcher). The participants were informed that the test was designed for a scientific research purpose and it has nothing to do with their marks.

4.1.6 Pilot Study

To examine the appropriateness of the test items as well as their validity and reliability, the test was administered on a random sample of (30) grade nine male students from the same

school Deir El Balah Prep. "B" Boys' School. The results were recorded and statistically analyzed to estimate the validity and the reliability of the test. The necessary modifications were made in the light of the statistic of results. The clarity of the rubrics and questions was also checked. The misleading items were modified.

This trial application helped the researcher to:

- a** - estimate the time needed for answering the test,
- b**-measure the coefficient of difficulty of the test,
- c**- calculate the coefficient of discrimination of the test, and
- d**-make the necessary modifications.

4.1.7 Time Needed for the Spelling Test

Time was measured according to the following equation:

$$\frac{\text{Time of the first student} + \text{time of the last student}}{2}$$

2

The first student finished the spelling test after 35 minutes and the last one after 45 minutes. Therefore the suitable time for applying the spelling test was (40) minutes.

4.1.8 Difficulty Coefficient

That's to mean the percent of the felling students to the total students who answered the test. This form was calculated according to the following equation:

$$\text{Difficulty Coefficient} = \frac{\text{No. of felling students}}{\text{the total students who answered the test}} \times 100$$

Table (2) shows the difficulty coefficient for each items of the test:

Table (2)
Difficulty Coefficient for Each Items of the Test

No.	Difficulty Coefficient
1	0.79
2	0.76
3	0.69
4	0.68
5	0.65
6	0.77
7	0.79
Total Difficulty Coefficient	0.73

Table (2) illustrates that the difficulty coefficient of the test items wobble between (0.65-0.79) with total average (0.73), and that means all the items were accepted or in the normal limit of difficulties.

4.1.9 Discrimination Coefficient

That means the test ability to differentiate between the high achievers students and the low achievers.

$$\text{Discrimination Coefficient} = \frac{\text{No. of the student who has the correct answer from the high achievers}}{\text{Total of high achievers students}} - \frac{\text{No. of the student who has the correct answer from the low achievers}}{\text{Total of low achievers students}}$$

Table (3) shows the discrimination coefficient for each items of the test.

Table (3)

Discrimination Coefficient for Each Items of the Test

No.	Discrimination coefficient
1	0.51
2	0.40
3	0.64
4	0.35
5	0.51
6	0.64
7	0.77
Total Discrimination Coefficient	0.54

Table (3) indicates that the discrimination coefficient wobble between (0.35-0.77) with total average (0.54), and that means each item is acceptable or in the normal limit of discrimination according view of point of assessment and evaluation specialist.

4.1.10 Validity of the Test

Al Agha (1996:118) states that valid test is the test that measures what it is designed to measure. The study used the referee validity and the internal consistency validity.

4.1.11 Referee Validity

The test was discussed by a panel of specialists in English language and methodology in Gaza universities, Ministry of Education and experienced supervisors and teachers in UNRWA and governmental schools. Appendix(3)

Some items of the test were modified, substituted, or deleted according to their recommendations.

4.1.12 Internal Consistency Validity

Al Agha (1996:121) reports that the internal consistency validity indicates the correlation of the degree of each item with the total average of the test. It also indicates the correlation of the average of each scope with the total average. This validity was calculated by using Pearson Formula .

According to table (4) the coefficient correlation of each item within its scope is significant at levels (0.01) and (0.05).

Table (4)

Correlation Coefficients of Each Item Degree with the Total Degree

No.	Pearson Correlation	Sig. Value	Sig. Level
1	0.950	0.000	sig. at 0.01
2	0.814	0.000	sig. at 0.01
3	0.761	0.000	sig. at 0.01
4	0.375	0.041	sig. at 0.05
5	0.891	0.000	sig. at 0.01
6	0.813	0.000	sig. at 0.01
7	0.891	0.000	sig. at 0.01

r table value at df (28) and sig. level (0.05) = 0.361
r table value at df (28) and sig. level (0.01) = 0.463

According to Table (4), the coefficient correlation of each item is significant at (0.01)and (0,05). It can be concluded that the test is highly consistent and valid to be used as a tool of the study.

4.1.13 Reliability of the Test

Reliability is the degree to which there is consistency of scores students would receive on alternate forms of the same test. The test is reliable when it gives the same results if it is reapplied in the same conditions (Mackey & Gass 2005:364).

The reliability of the test was measured by the Spilt-half Techniques and Kud-Richardson (K-R20).

By Using Split Half

Correlation between Two Parts (Even X Odd) and Modify by Spearman Brown:

Table (5)

SPILT –HALF TECHNIQUE			
	TOTAL	BEFORE	AFTER
Observation Card	7	0.934	0.938

Table (5) demonstrates that the Spilt-half Technique is (0.938) and this proves the high reliability of the test.

Kud-Richardson (K-R20)

(K-R20) depends on calculating the percentages of correct answers to the test items, and also on the variance of every item.

Table (6)

(K-R20) Coefficients for the Test Domains

TOTAL	(K_R20) Coefficient
42	0.907

4.1.14 Scoring of the Test

To avoid personal inflections and to have real results, the researcher trained another English language teacher from the same school (Deir El Balah Prep. "B" Boys' School) to help in correcting the test papers. The researcher corrected the test papers of the control group while the other teacher corrected the test papers of the experimental one. One degree was given to each item, so the maximum average was (42) and the minimum was (zero).

4.2 Social Validity Questionnaire

Social validity data were collected to determine the appropriateness of the chosen target behaviors, to ensure that the intervention procedures were accepted, and to determine the significance or importance of the changes in participants' behavior.

Social validity data were important to this study to determine if CCC intervention strategy was accepted by the participants and how important or significant they felt the intervention changed their spelling abilities.

Social validity data were collected using 15-statements questionnaire given to the participants. Appendix (2)

4.2.1 Aims of the Questionnaire

The questionnaire was constructed to measure how well the participants liked using the strategy, if they felt it was easy, if they felt they might use it in the future, and if they believed their spelling had improved as a result of using the strategy.

4.2.2 Steps of Constructing the Questionnaire

The researcher constructed this questionnaire depending on:

1-Reviewing and analyzing related previous studies: Carter et. al (2011), Mann et. al (2010), Becker et. al (2009), Erion et. al (2009), Jasper (2009), Kosmac (2009), Moser (2009), Cates et. al (2007), Nies & Belfiore(2006), Conley et. al (2004), Skinner et. al (1993), and Skinner & Belfiore(1992).

2- Consulting a panel of specialized professors.

4.2.3 Referee Validity

The questionnaire was introduced to a jury of specialists in English language and methodology in Gaza universities. The items of the questionnaire were modified, substituted or deleted according to their recommendations.

4.2.4 Description of the Questionnaire:

The questionnaire consisted of 15 statements. It was administered a day after the retention test. Results of the questionnaire were recorded and statistically analyzed. A Likert type scoring format was used in this questionnaire (Table 7). Students were asked to indicate the extent to which they agree with each statement on a five-point scale ranges from strongly agree to strongly disagree.

Table(7)
Likert Scale

Type of Items	Strongly Agree	Agree	I Don't Know	Strongly Disagree	Disagree
Positive Sentences	5	4	3	2	1
Negative Sentences	1	2	3	4	5

4.2.5 Instructions of the Questionnaire (for students)

The instructions were given to the participants by their teacher (the researcher). To avoid ambiguity, the statements of the questionnaire were translated into Arabic in order to get students understand the items easily and accurately.

5. Variables of the Study

The study included the following variables:

The independent variables included

- a. The teaching methods: CCC Method and traditional method.
- b. The students' general knowledge of English language.

The dependent variables included

- a- Students' achievement in spelling pre-post and retention tests served as the dependent variable.
- b- Students' attitudes towards the CCC strategy.

6. Controlling the Variables

To avoid any marginal interference that may affect the results of the study, the researcher tried to control four variables before the study.

6.1 Age Variable

The researcher recorded the students' ages from their school files at the beginning of the school year (2010/2011). The mean and the standard deviation were calculated for each group, and then T-test was used to measure the statistical differences.

Table (8)
T-test Results of Controlling Age Variable

Scope	Group	N	Mean	Std. Deviation	T	Sig. Value	Sig. Level
Age	Experimental	30	14.558	0.188	0.268	0.790	not sig.
	Control	30	14.572	0.198			

“t” table value at (58) d f. at (0.05) sig. level equal 2.00

“t” table value at (58) d f. at (0.01) sig. level equal 2.66

Table (8) indicates that there were no statistically significant differences at (0.05) level between the experimental and the control groups due to age variable.

6.2 General Achievement Variable

T-test was used to measure the statistical differences between the two groups due to their general achievement. The participants' results in the final first- term test of the school year (2010/2011) were recorded and analyzed.

Table (9)

T-Test Results of Controlling General Achievement Variable

Scope	Group	N	Mean	Std. Deviation	T	Sig. Value	sig. Level
English Achievement	Experimental	30	764.500	171.456	0.018	0.986	not sig.
	Control	30	765.267	155.053			

Table (9) shows that there were no statistical differences at (0.05) between the experimental and the control participants due to general achievement variable.

6.3 Achievement in English Variable

T-test was used to measure the statistical differences between the groups due to their achievement in English language. The participants' results in the final first-term test of the school year (2010/2011) were recorded and analyzed.

Table (10)

T-Test Results of Controlling English Achievement Variable

Scope	Group	N	Mean	Std. Deviation	T	Sig. Value	Sig. Level
General Achievement	Experimental	30	79.767	7.894	0.932	0.355	not sig.
	Control	30	77.867	7.899			

Table (10) illustrates that there were no statistical differences at (0.05) between the experimental and the control participants due to the achievement in English variable.

6.4 Pre-Test Equivalent

To make sure that the sample participants are equivalent in their previous spelling ability ,the researcher applied the pre- achievement test. The results of the participants were recorded and statistically analyzed using T-test.

Table (11) shows the mean and the standard deviation in the pre-test of each group. The results analysis indicates that there are no statistical significant differences between the experimental and the control groups at (0.05) level.

Table (11)

T.Test Results of the Experimental and Control Groups in the Pre-Test

Scope	Group	N	Mean	Std. Deviation	T	Sig. Value	sig. Level
Spelling Achievement	Experimental	30	18.867	8.123	0.237	0.813	not sig.
	Control	30	18.367	8.202			

Tables (11) indicates that there are no statistical significant differences at (0.05) level among experimental and the control groups due to previous learning variable.

7. Statistical Analysis Procedures

The pre-post and retention tests results and the questionnaire responses were collected, computed, and analyzed by using Statistical Package for Social Science (SPSS). The significance level used was 0.05. The following statistical types were used:

1. Spearman Correlation: to determine the internal consistency validity of the questionnaire items and the evaluation criteria of the test.
2. Split-Half Technique: to test the reliability of the questionnaire items.
3. T. Test Independent Samples: to control the interferential variables and to measure the statistical differences in means between the two groups due to the study variables.

4. T. Test Paired Sample: to figure out any statistical differences within the experimental group respondents.

5. Effect Size level by using T Value, Eta Square, and Cohen's D: to check the effect value (extent) of the evident significant differences between the two groups and within the experimental group.

8. Project of the Study

The study aimed at improving the spelling skills of ninth graders using CCC strategy for teaching spelling. In order to achieve this goal it is important to describe English *for Palestine grade 9*.

Ninth Grade Curriculum

The curriculum of the ninth grade consists of four components: the Student's Book, the Workbook, the Teacher's Book and two cassettes. They are listed below:

Student's Book

Student's Book contains material (16 units) for one school year. The 16 units contain 306 activities-149 activities for the first semester and 157 for the second semester. The Student's Book includes 14 main teaching units which contain 9 lessons each, divided into three pairs. Each pair of lessons is on two pages. There are two revision units, unit 8 and unit 16, each designed to take four lessons. The word list at the end of the Student's Book contains new vocabulary for active learning in unit-by unit alphabetical order. Parts of speech are also noted. The units are two-week units, each with 9 lessons. In each lesson, there is an emphasis on a particular skill area. For example, lesson one is always listening.

Workbook

Workbook provides exercises and activities that help students to practice and consolidate what they have learned in Student's Book. There are 199 activities in the Workbook-103 activities for the first semester and 96 activities for the second semester. Unit 8 and Unit 16 are practice tests. Teachers can use them as tests or work through the activities with the students as further revision.

Cassette

The cassette provides both listening material and pronunciation model. The students listen to texts, stories, dialogues and poems and perform them to the class. There are also a regular pronunciation focus.

Teacher's Book

Teacher's Book provides a guide to the components of the course and the lessons through lesson-by-lesson notes. It also contains an explanation of the aims and approach of the course. It also provides teachers with the tape scripts for all the recorded material.

9. Implementation of the Experiment

The experiment lasted for 5 weeks. Three times a week-except the last week only twice-the ninth graders in the two groups received spelling instruction for 10 minutes at the beginning of the English lesson. By the end of each week, students learned 9 words of the list- except the last week-only 6 words. CCC strategy was used to teach spelling for the experimental group while the Traditional Method was used to teach spelling for the control group.

All students of the experimental group were trained in their classroom on how to use CCC strategy by their teacher (the researcher). CCC procedures were stated and modeled for the entire class. All necessary materials were given to the students to follow along during training. This training lasted for 30 minutes and took place a day before implementing the experiment.

During the implementation of the experiment, the researcher used flashcards similar to those used in teaching all new English vocabulary. CCC procedures for this study included four basic steps: (a) the students look at the word on the flashcard that the teacher holds, (b) the teacher says the word for three times and the students copy the word, (c) the teacher turns over the flashcard and the students write the word from memory, and (d) the teacher turns the flashcard back over and the students check the spelling for accuracy.

Chapter IV

Results: Data Analysis

Chapter IV

Results: Data Analysis

Introduction

The study aimed at examining the effect of CCC strategy for teaching spelling on the ninth graders' acquisition and retention of spelling at an UNRWA school in the Middle Governorate of the Gaza Strip. The social validity of the strategy was also investigated.

This chapter puts forward the statistical analysis of the data collected through the study. Various forms of statistics are used. Tables are also used to clarify the results.

1. Data Analysis

1.1 Answers of the First Question

1- Are there statistically significant differences at ($\alpha \leq 0,05$) in the total average score of the post-test between the experimental group and the control group?

To answer the first question, mean and standard deviation of the experimental and the control groups' results were computed. T.Test Independent Sample was used to measure the significance of differences.

Table (12) shows the results.

Table (12)

T.Test Independent Sample Results of the Differences in the Total Average Score of the Post-Test between the Experimental and Control Group

Scope	GROUP	N	Mean	Std. Deviation	T	Sig. Value	Sig. Level
Post Test	Experimental	30	30.700	9.422	3.659	0.001	sig. at 0.01
	Control	30	22.067	8.843			

Table (12) shows that the T. computed value is larger than T. table in the test which means that there are significant differences at ($\alpha \leq 0.01$) in the total average score of the post-test between the experimental and control group in favor of the experimental group. The mean of the post-test in the experimental group reached (30.700), whereas the mean of the control group was (22.067) . This result indicates that CCC strategy is more effective than the traditional method in improving the participants' spelling ability.

To measure the "Effect Size" of the CCC strategy on the experimental group spelling achievement, the researcher used Eta square " η^2 " by using the following formula (Afana,2000: 42).

$$\eta^2 = \frac{t^2}{t^2 + df}$$

Also the researcher calculated "d" value by using the following equation:

$$d = \frac{2t}{\sqrt{df}}$$

Table (13)
Criterion of "Effect Size"

Test	Effect Volume		
	Small	Medium	Large
η^2	0.01	0.06	0.14
d	0.2	0.5	0.8

Table (14)
The Effect Size of CCC Strategy on the Experimental Group's Achievement in Spelling in the Post-Test

Domain	T Value	η^2	d	Effect Volume
	3.659	0.188	0.961	Large

Table (14) shows that the effect size of CCC strategy on spelling achievement of the experimental group was large. This means that CCC strategy for teaching spelling had a large effect size and improved the ninth graders' spelling skill.

1.2 Answers of the Second Question

2- Are there statistically significant differences at ($\alpha \leq 0.05$) in the total average score between the post-test and the retention test of the experimental group?

To answer the second question, means and standard deviation of both post-test and retention test results were computed. Paired sample T-Test was used to measure the significant differences.

Table (15) shows the results.

Table (15)
T.Test Paired Sample Results of the Differences in the Total Average Score between the Post-Test and the Retention Test of the Experimental Group

Criteria	Applied	N	Mean	Std. Deviation	T	Sig. Value	Sig. Level
Total Degree of the Tests	Post Test	30	30.700	9.422	0.513	0.612	not sig.
	Retention Test	30	29.433	9.515			

Table (15) shows that the T. table value is larger than T. computed value in the retention test. That means there are no statistically significant differences at ($\alpha \leq 0.05$) in the total average score between the post-test and the retention of the experimental group. The mean of the post -

test was (30.700) while the mean of the retention test was (29.433). This result indicates the long-term effect of CCC strategy on the experimental students' spelling skills.

1.3 Answers of the Third Question

3- Are there statistically significant differences at ($\alpha \leq 0,05$) in the total average score of the retention test between the experimental group and the control group?

To answer the third question, mean and standard deviation of the experimental and the control groups' results were computed. T. Test Independent Sample was used to measure the significance of differences.

Table (16) shows the results.

Table (16)

T. Test Independent Sample Results of the Differences in the Total Average Score between the Experimental and the Control Group in the Retention Test

Criteria	Applied	N	Mean	Std. Deviation	T	Sig. Value	Sig. Level
Total Degree of the Retention Tests	Experimental	30	29.433	9.515	6.061	0.000	sig. at 0.01
	Control	30	16.133	7.343			

Table (16) shows that the T. computed value is larger than T. table in the test which means that there are significant differences at ($\alpha \leq 0.01$) in the total average score of the retention test between the experimental group and the control group in favor of the experimental group. The mean of the retention test in the experimental group reached (29.433), whereas the mean of the control group was (16.133). This means that CCC strategy is more effective than the traditional approach in the retention of the correct spelling.

To calculate the size effect the researcher used Eta square " η^2 " and "d" size effect:

Table (17)
The Effect Size of CCC Strategy on the Experimental Group's Achievement in Spelling in the Retention Test

Domain	T Value	η^2	D	Effect Volume
	6.061	0.388	1.592	Large

Table (17) shows that the effect size of CCC strategy was large on the retention of the correct spelling of the experimental group students. This indicates that CCC strategy for teaching spelling was more effective than the traditional approach related to the retention of the correct spelling.

1.4 Answers of the Fourth Question

5-What are the students' attitudes towards the CCC strategy?

To answer this question, means and standard deviation of the experimental group results of the social validity questionnaire were computed.

Table (18) shows the results.

Table (18)
Results of the Social Validity Questionnaire

No.	Items	Sum	Mean	Std. Deviation	%	Rank
1	I think that CCC strategy helps me to be a good speller.	147	4.900	0.305	98.00	3
2	I feel that CCC is an enjoyable and interesting strategy.	147	4.900	0.305	98.00	3
3	I believe that CCC strategy helps me to concentrate well when learning the spelling of words.	145	4.833	0.379	96.67	9
4	I believe that the use of CCC strategy helps me to master the spelling of problematic words.	147	4.900	0.305	98.00	3
5	I believe that CCC strategy helps me a lot in retaining the correct spelling.	145	4.833	0.379	96.67	9
6	I think that CCC strategy gives me the opportunity to correct my spelling errors immediately.	146	4.867	0.346	97.33	6
7	I feel that CCC strategy is simple and easy to use.	146	4.867	0.346	97.33	6
8	I feel that CCC strategy motivates me more to learn the spelling of words.	145	4.833	0.592	96.67	9
9	I feel that CCC strategy gives me more self-confidence in learning the spelling of words.	144	4.800	0.407	96.00	12
10	I think that CCC strategy is of little effect on memorizing the correct spelling of words.	146	4.867	0.346	97.33	6
11	I think that learning spelling using CCC strategy is better than the old method.	149	4.967	0.183	99.33	1
12	I feel that CCC strategy is boring and complicated.	139	4.633	1.129	92.67	13
13	I think that it is better for all English teachers to use CCC strategy in teaching spelling.	135	4.500	1.137	90.00	15
14	I think that the use of CCC strategy needs more time and efforts than the old method.	136	4.533	1.137	90.67	14
15	I prefer to use CCC strategy in learning spelling in the future.	148	4.933	0.254	98.67	2
	Total Degree	2165	72.167	5.590	96.22	

Table (18) shows that (96.22%) of the participating students think that CCC strategy is socially valid. This means that (96.22 %) of the participating students enjoyed using CCC and felt like they were better spellers after having used the strategy. They also indicated that they thought the strategy was easy to use and that they will use CCC in the future.

2. Summary

Chapter 4 discussed the statistical analysis of the results of post-test, retention tests and social validity questionnaires. The results of the post-test and retention tests indicated the significant role of CCC strategy in improving the spelling skills of ninth graders. The results also revealed that CCC strategy had more effects than the traditional approach related to the number of words spelled correctly and to the retention of the correct spelling of words.

The results of the social validity questionnaire revealed that CCC strategy was socially valid. The participating students felt that the CCC strategy was enjoyable, interesting and easy to use and helped them to become better spellers. The students also thought that the CCC strategy for teaching spelling was better than the traditional approach.

Chapter V

Findings, Discussion, Conclusions, and Recommendations

Chapter V

Findings, Discussion, Conclusion and Recommendations

Introduction

This chapter discusses the findings of the study in relation to the research questions and relevant body of literature. It sums up the conclusions that were deduced from the results of the study. Pedagogical implications as well as recommendations are also provided. Finally, suggestions for future research are presented. Such suggestions are expected to be beneficial for course designers, English teachers, supervisors, students and educators. They could help improve teaching English language in general and spelling skills in particular.

As stated earlier, this study examined the effect of CCC strategy for teaching spelling on the ninth graders' acquisition and retention of spelling. It attempted to determine whether CCC strategy would improve the performance of spelling in isolation (spelling single words) and spelling in context (spelling words in sentences). The study also measured the long-term effect of the CCC on the retention of correct spelling. Moreover, the students' attitudes towards the strategy was investigated.

1- Findings

- a. There were statistically significant differences at ($\alpha \leq 0,05$) in the total average score of the post-test between the experimental group and the control group in favor of the experimental group.
- b. There were no statistically significant differences at ($\alpha \leq 0,05$) in the total average score between the post-test and the retention test of the experimental group.

c. There were statistically significant differences at ($\alpha \leq 0,05$) in the total average score of the retention test between the experimental group and the control group in favor of the experimental group.

d. Almost all the experimental group students (96.22 %) showed satisfaction with CCC strategy, enjoyed using it and felt like they were better spellers after having used the strategy. They also indicated that they thought the strategy was easy to use and they would use it in the future when learning spelling.

The researcher also used the Effect Size Technique to measure the effect of CCC strategy on students' achievement in spelling. The statistical results indicated that CCC strategy had a clear effect on both the acquisition and retention of the correct spelling.

Through empirical investigations, CCC has been found to be an effective strategy for teaching spelling. This means that students were able to spell words accurately after using CCC strategy. Further, the students were able to maintain the correct spelling of words that they previously spelled correctly in the post-test.

This study provided clear support for previous findings that showed CCC was effective for increasing spelling accuracy (Carter et. al (2011), Mann et. al (2010), Becker et. al (2009), Erion et. al (2009), Jasper (2009), Kosmac (2009), Moser (2009), Cates et. al (2007), Nies & Belfiore(2006), Conley et. al (2004) Skinner et. al (1993), and Skinner & Belfiore(1992).

2. Discussion

The results of the study were discussed in terms of the research questions presented in chapter (I).

2.1 Interpretation of the Results Related to Question Number One

Question One: Are there statistically significant differences at ($\alpha \leq 0,05$) in the total average score of the post-test between the experimental group and the control group?

There were differences of statistical significance in the ninth graders' spelling achievement due to the method used in favor of CCC strategy. The mean of the total average score of post-test of the experimental group's students was (30.700), whereas the mean of the total average score of the post-test of the control group's students was (22.067). The effect size of CCC strategy was also large.

The results of this study, concerning this question, confirmed the results of earlier studies, that the self correction procedures for teaching spelling, which is the main component of CCC strategy, is more effective than the traditional approach (Gomez & Belfiore(2000),Spaine (1999), McGuffin et. al (1997), Zakiah (1996), McGuffin (1995), McNeish et. al (1992), Wirtz (1992), and McNeish (1985).

These results are attributed to the following main reasons

- 1- CCC strategy is simple and easy to use at the same time. It is a manageable and flexible spelling strategy. It enables students to be responsible for their work, to work independently and at their own pace.
- 2- CCC strategy enables the students to practice words until they are mastered, unlike the traditional approach where regardless of the students' performance with former words, new sets of words are issued each week.

3- CCC requires brief amount of time allowing more time for the teacher to teach, supervise and monitor students' progress.

4- In CCC strategy, direct and explicit instruction on specific words is provided, unlike traditional approach in which teachers teach spelling by writing words on flashcards and exposing students to them many times or by having students write words many times.

5- CCC strategy provides the student with immediate feedback. Students correct their own mistakes immediately.

6- Self correction, as in the case of CCC strategy, that is quick and rapidly tells, shows, and demonstrates the correct response in several seconds, is generally better than lengthy discussions and explanations in an effort to help the student "understand" his or her mistake.

2.2 Interpretation of the Results Related to Question Number Two

Question Two: Are there statistically significant differences at ($\alpha \leq 0.05$) in the total average score between the post-test and the retention test of the experimental group?

There were not differences of statistical significance in the ninth graders' spelling achievement between the mean of total average score of the post-test and the mean of total average score of the retention test of the experimental group. The mean of the total average score of the post-test of the experimental group's students was (30.700), while the mean of the total average score of the retention test was (29.433).

The outcomes of this study, regarding this question, are consistent with previous research, that CCC strategy for teaching spelling had a long-term effect related to the retention of correct spelling (Carter et. al (2011), Mann et. al (2010), Becker et. al (2009), Erion et. al (2009), Jasper (2009), Kosmac (2009), Moser (2009), Cates et. al (2007), Nies & Belfiore(2006), Conley et. al (2004) Skinner et. al (1993), and Skinner & Belfiore(1992).

These results could be attributed to the following main reason

1-The immediate self correction component of CCC prevents students from practicing inaccurate responses. It ensures that the last response within each CCC learning trial is correct. Therefore, it prevents future errors due to recency effects.

2.3 Interpretation of the Results Related to Question Number Three

Question Three: Are there statistically significant differences at ($\alpha \leq 0,05$) in the total average score of the retention test between the experimental group and the control group?

There were differences of statistical significance in spelling achievement between the experimental group and control group regarding the retention of the correct spelling in favor of the experimental group. The mean of the total average score of the retention test of the experimental group's students was(29.433), while the mean of the total average score of the retention test of the control group's students was (16.133) . The effect size of the CCC strategy was also large.

The findings of this study ,regarding this question, supported the results of previous research , that CCC strategy for teaching spelling is more effective than the traditional approach in terms of the retention of the correct spelling(Carter et. al (2011), Mann et. al (2010), Becker et. al (2009), Erion et. al (2009), Jasper (2009), Kosmac (2009), Moser (2009), Cates et. al (2007), Nies & Belfiore(2006), Conley et. al (2004) Skinner et. al (1993), and Skinner & Belfiore(1992).

These results could be due to the following main reason

1- English spelling can only be learned by active practice. CCC strategy gives the students the opportunity to practice spelling more than the traditional method does. CCC strategy also encourages students to think about the words and provides them with problem solving strategies

for spelling the words. While the traditional approach emphasizes memorization and more concerns with what to teach in spelling rather than how it might be taught. So, CCC strategy has a long-term effect comparing with the traditional approach.

2.4 Interpretation of the Results Related to Question Number Four

Question Four: What are the students' attitudes towards the CCC strategy?

The social validity questionnaires that were completed by the participating students indicated that almost all the students (96.22 %) showed satisfaction with CCC strategy enjoyed using it and felt like they were better spellers after having used the strategy. They also indicated that they thought the strategy was easy to use and they would use it in the future when learning spelling.

Overall, the students appeared to be excited to participate in CCC intervention. On many occasions, the students made many positive comments when using CCC such as “I love this!” “I’m good at this!”. Based on these comments, it appeared that the students enjoyed taking part in the intervention and felt better about their spelling.

3. Conclusion

Based on the findings derived from the results of this study, the following conclusions were reached:

- 1-** CCC strategy is an effective strategy and has superiority over the traditional approach in teaching spelling.
- 2-** CCC strategy has more long- term effects on the retention of the correct spelling than the traditional approach.
- 3-** CCC strategy is simple and easy to use provides discrete learning trials for students, and can be individualized.

- 4- Students using CCC strategy have multiple opportunities to respond to the presented words and practice immediate error self-correction when checking their responses to them.
- 5- The brief time required for each CCC learning trial allows students to complete many learning trials in a minimal period of time.
- 6- Because CCC is a simple intervention with few, clear, discrete- steps, training and re-training takes very little time allowing more time for teacher to teach and students to learn.
- 7- Since CCC is designed to be a self-managed intervention, not only are students able to self-correct mistakes and quickly practice correct responses, but they also are able to work independently and at their own pace. Teachers may provide supervision, monitor student progress and develop CCC materials; however, the student manages the core intervention.
- 8- CCC strategy can be used with large groups, small clusters and individuals.
- 9- CCC strategy enables the students to practice words until they are mastered, unlike the traditional approach where regardless of the students' performance with former words, new sets of words are issued each week.
- 10- Direct instruction on specific words is provided during CCC strategy, improving the spelling performance of students.
- 11- CCC strategy provides the student with immediate feedback. Students correct their own spelling mistakes immediately.
- 12- CCC strategy is easy to use. It is a manageable and flexible spelling procedure that can be incorporated in any classroom.
- 13- CCC strategy can be implemented in home-based programmes where parents serve as monitors for spelling performance.

14- CCC strategy enables students to be responsible for their work, giving the teacher time for coordinating, and monitoring implementation of the learning tasks. The teacher is also free to attend to peculiar problems of individual students, resulting in an effective learning environment.

4. Pedagogical Implications

The pedagogical implication of the results of the current study suggests that:

1- CCC is an effective strategy and has superiority over traditional approach. It is highly recommended as an effective and socially valid spelling strategy to increase the number of words students spell correctly. It is also characterized by its long-term effect on the retention of correct spelling.

2- English spelling is a precise skill which is important yet difficult to master at any level of development. It is a subject that allows for no creativity or differences of opinion. Only one spelling of a word is correct. Thus, teacher should pay more attention to spelling and spelling instruction.

3- Learning to spell is not a matter of memorizing words and teaching spelling should not consist merely of presenting students with lists of words without the explicit teaching of spelling knowledge.

4- Learning to spell must be embedded in all areas of English language learning. It should not be taught as an isolated operation; reading, writing, and spelling activities are the contexts within which children gradually learn to spell.

5- Students require practice over a long period of time to become proficient spellers. So they must be encouraged to write everyday and experiment with forms of writing in which their spelling, understanding and fluency is developed and extended. The evidence is clear that students who write frequently become better spellers.

6- Spelling instruction needs to be carefully sequenced so as to build up from common, regular words to uncommon, specialized words. It should be taught systematically; the right words and patterns must be presented at the right time in the student's development.

7- Teaching spelling requires that the teachers hold a head full of techniques to use in responding to different types of learners, just as the teacher does for any subject in the curriculum.

8- Spelling can and should be taught as an interesting task that strengthens those relationships among reading, writing, and vocabulary knowledge. Students need to be taught spelling through direct, explicit and multisensory approach.

5. Recommendations

According to the conclusions and implications of the study, the following recommendations are offered:

Supervisors are recommended to:

1- draw English teachers' attention to the importance of spelling as a critical factor for effective writing,

2- prepare and distribute instructional materials that increase teachers' awareness of CCC strategy, as a new and effective strategy that suits all types of students in different ages and abilities,

3- develop and enrich the Palestinian Curriculum with different and assorted spelling exercises,

4- conduct training courses for teachers related to the implementation of CCC strategy in classrooms, and

5- conduct workshops that aim at familiarizing teachers with different techniques and procedures used in CCC strategy.

Teachers are recommended to:

- 1- pay more attention to spelling instruction, strategies, and teaching methods,
- 2- emphasize the importance of correct spelling,
- 3- provide opportunity for sufficient practice,
- 4- ensure maintenance of previously learned words,
- 5- build up from common, regular words to uncommon, specialized words,
- 6- not to teach spelling as an isolated operation; reading, writing, and spelling activities are the contexts within which children gradually learn to spell,
- 7- have the students correct their own spelling mistakes under your direction,
- 8- provide immediate feedback on the students' spelling errors,
- 9- allot five to ten minutes daily to formal spelling instruction, and
- 10- use spelling games to make spelling lessons more fun.

6. Recommendations for Further Studies

The findings of the present study indicated that CCC strategy for teaching spelling is an effective strategy to improve spelling performance.

The experiment nearly lasted for a month. A longer period of time to conduct the experiment would more effectively demonstrate whether or not a functional relationship exists between the dependent and independent variables.

The students in the current study were tested in spelling both in isolation and in context. The generalization of words learned during CCC intervention to written work is an area for further study.

The participants in this study were 60 ninth graders male students. Research involving larger sample, different age and different gender is needed.

7. Summary of the Study

The study aimed at examining the effect of CCC strategy for teaching spelling on the ninth graders' acquisition and retention of spelling at an UNRWA school in the Middle Governorate of the Gaza Strip. The social validity of the strategy was also investigated.

To achieve this goal the researcher used two tools:

- 1- spelling achievement tests (pre -test , post-test and retention test), and
- 2- social validity questionnaire.

The study attempted the experimental approach where there are two groups of ninth graders; an experimental group and a control one. To investigate the effect of using CCC strategy for teaching spelling on ninth graders' acquisition and retention of spelling, the researcher used a pre/ posttest control group design. CCC strategy was used in teaching the students of the experimental group while the traditional method was used with the control group student.

The sample of the study consisted of (60) nine grade male students distributed into two groups; an experimental group and a control group. Both groups have (30) students each. The groups were randomly chosen from a purposive sample from Deir El Balah Prep. "B" Boys' School that is an UNRWA school located in the Middle Governorate in the Gaza Strip where the researcher works as an English teacher.

This study consisted of five chapters. The first chapter started with an introduction, proceeded to statement of the problem and the research questions. After that, it dealt with the purpose of the study, limitation of the study, significance of the study and finally the definition of terms.

The second chapter was divided into two parts, the literature review and the previous studies. The purpose of the first part was to review literature relating to spelling instruction. It

also highlighted CCC strategy as a new strategy for teaching spelling. It was divided into four main sections that laid out important information for the design and purpose of this study.

The first section began with defining spelling. It also discussed the importance of spelling for communication, writing, reading, and academic success.

The second section presented the difficulty of English spelling and the problems that Arab learners face in this area.

The third section talked about spelling instruction in the classroom in the past and today. Moreover, it introduced the ongoing controversy of spelling instruction on the best way to teach spelling in the classroom.

The fourth section introduced major approaches to teaching spelling. It highlighted the CCC strategy and its effect on improving spelling skill. These four sections were followed by the researcher's comments on the literature.

The purpose of the second part of the chapter was to review previous studies related to spelling instruction. It surveyed twenty-eight studies thoroughly in an attempt to support the current study. The studies were divided into three domains and sequenced thematically. The first domain, which included twelve studies, reviewed studies related to CCC strategy and its role in improving spelling skill. The second domain also contained twelve studies related to the impact of self correction, as the main component of CCC strategy, on improving spelling skill. The third domain consisted of four studies related to the effects of immediate self correction, as compared with delayed self correction, on spelling skill. These three domains were followed by the researcher's comments on the previous studies.

In chapter three, the researcher introduced the procedures followed throughout the study. It included description of methodology of the study, sample of the study, instrumentation of the

study and control the variables of the study. It also presented research design in addition to the statistical treatment for the study findings.

Chapter four presented the results of the study that have been reached with the use of the statistical program (SPSS) for data processing. The findings of each question was presented as followed:

- 1- There were statistically significant differences at ($\alpha \leq 0,05$) in the total average score of the post-test between the experimental group and the control group in favor of the experimental group.
- 2- There were no statistically significant differences at ($\alpha \leq 0,05$) in the total average score between the post-test and the retention test of the experimental group.
- 3- There were statistically significant differences at ($\alpha \leq 0,05$) in the total average score of the retention test between the experimental group and the control group in favor of the experimental group.
- 4- Almost all the experimental group students (96.22 %) showed satisfaction with CCC strategy, enjoyed using it and felt like they were better spellers after having used the strategy. They also indicated that they thought the strategy was easy to use and they would use it in the future when learning spelling.

The researcher also used the Effect Size Technique to measure the effect of CCC strategy on students' achievement in English spelling skills. The statistical results indicated that CCC strategy had a clear effect on both the acquisition and retention of the correct spelling.

Chapter five presented the findings, conclusion, pedagogical implications, recommendations and suggestions for further researches and the summary of the study.

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APPENDICES

Appendices

Appendix (1)

Spelling Achievement Test

The Islamic University of Gaza

Postgraduate Studies Deanship

Faculty of Education

English Curriculum & Methodology Department



Dear Supervisor, /Expert teacher,

The researcher is conducting a study entitled "The Effect of the Copy, Cover and Compare Strategy on the Ninth Graders' Acquisition and Retention of Spelling and their Attitudes Towards the Strategy" to obtain a Master's Degree in Curriculum and English Teaching Methods. One of the requirements of this study is to prepare a spelling test. Because of the importance of your opinion and experience, you are kindly requested to look carefully at the items of the test to:

- 1-** determine the degree of suitability of each item of the test,
- 2-** modify the language if necessary,
- 3-** add other items not mentioned in the test, and
- 4-** suggest ideas or issues to enrich the test.

Please tick (✓) if the item is suitable or (×) if the item is not suitable
(Key: 1 = suitable, 2 = not suitable, 3 = others)

Thanks a lot for your co-operation.

Supervisor

Teacher

Years of Experience

Researcher,

Tayseer Yousef Mesmeh

Dear educators, supervisors and teachers

It would be grateful if you check items of the spelling test within the following criteria:

Spelling skills to be tested

The spelling test should examine the ninth graders' ability to:

- 1-correctly spell words that have been previously studied (the highlighted words covered so far in the second semester 2010/2011), and
- 2-spell a large body of words (42) accurately and quickly when writing.

Table For Evaluating Spelling Skill Test

Question (1)

No	Item	1	2	3
1	The rubric			
2	Number of words			
3	Difficulty			
4	Time			

Question (2)

No	Item	1	2	3
1	The rubric			
2	Number of words			
3	Difficulty			
4	Time			

Question (3)

No	Item	1	2	3
1	The rubric			
2	Number of words			
3	Difficulty			
4	Time			

Question (4)

No	Item	1	2	3
1	The rubric			
2	Number of words			
3	Difficulty			
4	Time			

Question (5)

No	Item	1	2	3
1	The rubric			
2	Number of words			
3	Difficulty			
4	Time			

Question (6)

No	Item	1	2	3
1	The rubric			
2	Number of words			
3	Difficulty			
4	Time			

Question (7)

No	Item	1	2	3
1	The rubric			
2	Number of words			
3	Difficulty			
4	Time			

Spelling Test For Grade 9

Name:

Mark : 42

Class:

Time: (40 m.)

1) Listen and write

(6 pts)

1-.....

2-.....

3-.....

4-.....

5-.....

6-.....

2) Choose the correct spelling to fill in the missing words

(6 pts)

1- China is the ----- of Giant pandas.

(habetat - hapitat - habitat)

2- Dinosaurs are ----- animals.

(ekstinct - extinct - extinkt)

3- Human, plant and animal life are ----- on Earth.

(partners - partnerz - partnres)

4- Mud , concrete and brick are building -----.

(matereals - materials - mterials)

5- All parents try to ----- their children from danger.

(protekt - protict - protect)

6- It is our ----- to help our friends and neighbours.

(duty - dyouty - duti)

3) Listen and complete the words with the correct vowels (a , e , i , o , u)

(6 pts)

1- b _ _ l _ d

2- r _ _ nf _ r _ sts

3- r _ w

4- _ f _ w

5- l _ _ f

6- c _ rb _ n cycl

4) **Listen and write the words correctly**

(5 pts)

- 1- rebonk ----- 2- teml -----
3- seytodr ----- 4- npsde -----
5- ilo -----

5) **Listen and fill in the missing words**

(7 pts)

- 1- Plant life ----- carbon dioxide and ----- oxygen.
2- Trees use light from the sun to ----- CO2.
3- All of us ----- oxygen and ----- carbon dioxide.
4- Oxygen is -----to all living things.
5 - As people grow up , they usually become more -----.

6) **Underline the correct spelling of the words you hear**

(6 pts)

- 1- fense fence finse fnce
2- balanse balans ballance balance
3- eksplode exblode explod explode
4- fraid freid fried frid
5- grilled grild grelled grillid
6- bench bentsh binch pench

7) **Listen carefully, then write the correct spelling of the underlined words**

(6 pts)

- 1- The children often play noizily . -----
2- I had beans stuw for breakfast this morning. -----
3- The food has gone bad and it is very smilly . -----
4- When you take some sugar, always put the led back on the jar.-----
5- Palestine has a kloser community. -----
6 - The clean white shirt fell in the mud and got stayned. -----

Key Answer of the Spelling Test

Question (1)

- 1- grass
- 2- notice
- 3- product
- 4- cleaner
- 5- dishonest
- 6 - part

Question (2)

- 1- habitat
- 2- extinct
- 3- partners
- 4- materials
- 5- protect
- 6- duty

Question (3)

- 1- boiled
- 2- rainforests
- 3- raw
- 4- a few
- 5- leaf
- 6- carbon cycle

Question (4)

- 1- broken
- 2- melt
- 3- destroy

4- spend

5- oil

Question (5)

1- Plant life **takes in** carbon dioxide and **gives out** oxygen.

2- Trees use light from the sun to **break down** CO2.

3- All of us **breathe in** oxygen and **breathe out** carbon dioxide.

4- Oxygen is **essential** to all living things.

5- As people grow up , they usually become more **responsible**.

Question (6)

1- fence

2- balance

3- explode

4- fried

5- grilled

6- bench

Question (7)

1- The children often play **noisily** .

2- I had beans **stew** for breakfast this morning.

3- The food has gone bad and it is very **smelly** .

4- When you take some sugar, always put the **lid** back on the jar.

5- Palestine has a **closer** community.

6 - The clean white shirt fell in the mud and got **stained** .

Appendix (2)

Social Validity Questionnaire

Dear student,

The researcher provided this social validity questionnaire to assess the appropriateness of CCC procedures, the acceptability of CCC strategy and the degree of improvement in the students' spelling skills.

The researcher kindly invites you to read the following questionnaire items carefully and then decide your opinion. The questionnaire grades are from *Strongly agree (5) to Strongly disagree (1)*.

Thanks for co-operation

The researcher

Tayseer Yousef Mesmeh

Please, Tick (√) the Answer that Best Shows your Opinion

(Key: 1= strongly disagree 2= disagree 3= not sure 4 = agree 5= strongly agree)

No.	Items	1	2	3	4	5
1	I think that CCC strategy helps me to be a good speller.					
2	I feel that CCC is an enjoyable and interesting strategy.					
3	I believe that CCC strategy helps me to concentrate well when learning the spelling of words.					
4	I believe that the use of CCC strategy helps me to master the spelling of problematic words.					
5	I believe that CCC strategy helps me a lot in retaining the correct spelling.					
6	I think that CCC strategy gives me the opportunity to correct my spelling errors immediately.					
7	I feel that CCC strategy is simple and easy to use.					
8	I feel that CCC strategy motivates me more to learn the spelling of words.					
9	I feel that CCC strategy gives me more self- confidence in learning the spelling of words.					
10	I think that CCC strategy is of little effect on memorizing the correct spelling of words.					
11	I think that learning spelling using CCC strategy is better than the old method.					
12	I feel that CCC strategy is boring and complicated.					
13	I think that it is better for all English teachers to use CCC strategy in teaching spelling.					
14	I think that the use of CCC strategy needs more time and efforts than the old method.					
15	I prefer to use CCC strategy in learning spelling in the future.					

Appendix (3)

Referee Committee

No.	Name	Qualification
1	Dr. Mohammad Atiya	Al Aqsa University (PhD)
2	Dr. Jamal Al Faleet	Ministry of Education (PhD)
3	Dr. Ahmad Allouh	UNRWA (PhD)
4	Mr. Ala'a Al Udaini	UNRWA (MA)
5	Mr. Ahmad Herzallah	UNRWA (MA)
6	Mr. Ali Zindah	UNRWA (MA)
7	Mr. Kamal Abu Shamla	Ministry of Education (MA)
8	Mr. Iyyad Abu Ghazala	UNRWA (MA)
9	Mr. Iyyad Al Najjar	UNRWA (MA)
10	Mr. Mohammad Al Faleet	UNRWA (MA)
11	Mr. Alaa Al Jadeeli	UNRWA (MA)
12	Mr. Nabeel Al Haj	UNRWA (BA)
13	Mr. Kamal Hassaballah	UNRWA (BA)
14	Mr. Mohammad Su'aifan	UNRWA (BA)

Appendix (4)

CURRICULUM VITAE (CV)

Researcher: Tayseer Yousef Mesmeh

Personal Details

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Qualifications

2009-2011 The Islamic University-Gaza
M.ED
English Curriculum & Teaching Methods

1998-2003 Al-Quds Open University Gaza
BA
English Language Teaching

Work Experience

2003 - STILL A teacher of English language - UNRWA Schools-Gaza