Kafr El-Sheikh University

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A Suggested CALL Program to Develop EFL College Learners' Mechanics of Writing

A TEFL Thesis Presented for the Master Degree in Education

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Abstract

The current study aims at investigating the effect of a suggested CALL program on developing EFL learners' mechanics of writing in English. An unbiased simple random sample of eighty fourth-year students (2006 / 2007) of the English Department at the Faculty of Education in Kafr El-Sheikh has been chosen to carry out the experiment. Forty students have been assigned to the experimental group to study mechanics of writing via the CALL program. An equal number of students has been assigned to the control group to study the same content as usual.

Material and tools, designed by the researcher, have been used either to collect the data or to carry out the experiment of this piece of research: a pilot study; an achievement test; the CALL program; a lecturer's guide; a students' guide and a questionnaire.

The experiment has taken ten weeks – including the pretest and posttest administrations. Afterwards, the researcher has used the One-Way ANOVA and the *t-test* in order to statistically analyze the obtained data. Findings refer to the fact that the suggested CALL program does develop EFL college learners' punctuation marks, capitalization and spelling (the three investigated components of writing mechanics).

Acknowledgement

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CHAPTER ONE

THE PROBLEM

Introduction

Writing a formal essay is not an easy task. Many elements are required so as to achieve it. Such elements include formatting the basic structure of an essay, having a good information background about the essay topic that generates well-arranged and well-developed ideas, using grammatical rules correctly and mastering the mechanics of writing.

EFL learners, usually at the different levels, study a course of *Essay Writing.* In a part of this course, an emphasis is laid on the mechanics of writing. However, writing mechanics is regarded as important not only for college students, but for writers in general as well. Mechanics of writing clarify the author's message and mark formal pieces of writing.   (King, 2003: 95) points out that "although punctuation marks may appear physically insignificant on a page of print and evanescent in our speech, without them all would be chaos." He adds that not knowing how to use them correctly can result in even greater chaos. Similarly, Allen and Huon (2003) argue that effective writing requires a sound understanding of the mechanics of good writing. A useful analogy in thinking about the mechanics of writing is that of driving a car. Punctuation is what is needed to keep the car moving along, stopping and starting in the right places, and pausing whenever it is necessary.

Besides, some researchers have shown an interest in mechanics of writing. For instance, Zemliansky (2000) overviews the changing attitudes towards the place of mechanics in writing instruction, as

documented in "College Composition and Communication" over the 50 years of the journal's existence. Similarly, Ward and Seifert (1990) examine the importance of a working knowledge of the mechanics of English language to good professional journalistic writing. Furthermore, Mullis and Mellon (1980) highlight the approaches used by the National Assessment of Educational Progress (NAEP) to characterize syntax, cohesion and mechanics as a scheme for rating essays.

On the other hand, CALL (Computer-Assisted Language Learning) programs have been widely activated to overcome various instructional and learning problems. Davies (2005) points out that using computers in language learning is, contrary to popular opinion, not a very new phenomenon. It dates back to the early 1960s, although it was confined in those days mainly to universities with prestigious computer science departments. By the early 1980s, however, CALL was in evidence in a large number of schools in the UK and the rest of Europe. Fotos and Browne (2004) highlight teaching Second and Foreign Language Writing on LANs (Local Area Networks) stating that the use of computers in writing classes has seen a rapid change within the past decade. They add that what began with asynchronous applications, such as word processing, has developed into real-time LANs for collaborative writing. Traditional classroom interactions are usually linear; when the teacher or a student speaks, the others listen. Therefore, with the introduction of LANs into writing classes, students have begun to interact freely, sharing ideas and receiving feedback from classmates and the teacher simultaneously. Teacher-centered classes have been transformed into classes where the students

often dominate interactions. Abrioux (1996) claims that CALL has become fully entrenched in campus-based L2 programs, and that there is an apparent paucity of CALL use in distance programs.

Murray (1997) focuses on the use of computers to facilitate communication in TESL programs. She points out that computer-mediated communication is an especially flexible tool for providing learners with a variety of truly communicative and collaborative language experiences. Murray describes four programs using e-mail for various purposes: writing and discussing papers and compositions, collaborative writing of a French Newspaper (all at the college level), and learning letter writing skills (at the elementary school level). Egbert et al. (1998) demonstrate the potential of the computer as an educational tool for English as a Second Language. Their state research already indicates that the computer can facilitate grammar and drill-based activities, and that the advantages of word-processing programs have also been well established. Computers have added a great deal of value to the writing process. Some programs help students in the pre-writing stage to generate and outline ideas. Most word-processors now come with spelling checkers, giving weak spellers some help in finding their errors and recognizing the correct spelling from a list of options. Dictionaries, as well, can run in the background and be accessed with a keystroke. (Warschauer and Healey, 1998).

The above mentioned viewpoints and discussions support using Computer-Assisted Language Learning in developing learners' writing and highlight the importance of mastering the mechanics of writing for EFL learners. As a result, the idea of this research is born.

Statement of the Problem

The problem of this study was derived from several resources:

[1] Observation

An odd observation has been taken during three years of surveying and reading the English Department students' written essays: Their essays are full of different problems in mechanics of writing. These problems are hardly avoided with the students' progress from one year to another. Logically, they should have acquired the rules of using the writing mechanics and got familiar with them through the different subjects they studied. Consequently, their being unaware of such problems is a question that needs investigation.

[2] Interview

An interview with specialized professors of Foreign Language Department and Curriculum and Methods of Teaching Department has aimed at raising the researcher's observation and inquiring whether EFL learners' mistakes in using mechanics of writing have also attracted the professors' attention during their teaching of such different courses as essay writing, novel, drama, translation and the like. College EFL learners' poor knowledge and usage of mechanics of writing have been a common complaint of almost all the professors the researcher met. Thus, the **interview** has supported the observation and necessitated the study.

[3] Pilot Study

The observation and the interview have been followed by a pilot study (See appendix A in this volume) so as to confirm them and

diagnose the problem on a real, scientific basis. One hundred and seventy three subjects have been tested. The test consists of fourteen items including punctuation marks and capitalization. Since its basic aim is to measure the level of learners' knowledge of mechanics of writing standard rules, the test simply raises one open-ended question. Learners have been asked to write all they know about the usages of each item. As for spelling, learners' mistakes are counted in each paper.

Directions of the Pilot Study

Before answering the test, learners were given the following directions:

(1) This is not a real test in the sense that it has nothing to do with your evaluation or semester exams. Its objective is to determine whether you have problems in using punctuation marks correctly. So, please feel easy and free while you answer.

(2) Write all that you know about the various usages of each punctuation mark.

(3) If you do not know any usage of a certain mark, please write: I am not familiar with it.

Results of the Pilot Study

[A] Punctuation Marks

Table (1): The Pilot Study Results (Punctuation)

Punctuation Marks	Incorrect + Missed Usage Percentage
Commas	91.14%
Semicolons	99.86%
Colons	97.61%
Periods (Full Stops)	83.38%

Exclamation Marks	63.87%
Question Marks	67.44%
Quotation Marks	88.44%
Dashes	100%
Hyphens	90.17%
Apostrophes	38.15%
Italics	90.03%
Slashes	94.36%
Ellipses	97.11%

[B] Capitalization

Table (2): The Pilot Study Results (Capitalization)

Item	**Incorrect + Missed Usage Percentage**
Capitalization	*78.21%*

** Total Incorrect + Missed Usage Percentage of Punctuation Marks and Capitalization = **86.89%**

[C] Spelling

Table (3): The Pilot Study Results (Spelling)

Item	**Testees' Number**	**Number of Errors**	**Errors Mean**
Spelling	**173**	**896**	**5.179**

The results indicate that a serious problem does exist in EFL learners' use of writing mechanics. Thus, a remedial program is due. The current CALL program concentrates on developing the ten punctuation marks that have shown an incorrect + missed usage percentage above 70%. Thus, three marks (Exclamation Marks, Question Marks and Apostrophes) are excluded.

[4] The Controversy among the Related Studies

Davis (2002) has made an experimental, statistical study in which he investigates the effects that a review of grammar and writing mechanics would have on the overall quality of college students' documents in technical / business communication. The results of the study show that the experimental group that received several exercises on grammar and mechanics has made statistically significant gains and outcomes over the control group that has received no treatment. Ballator et al. (1999) also describe two aspects of writing for which change has been measured since 1984: Writing fluency as determined by holistic scoring, and mastery of the conventions of written English as determined by mechanic scoring. Results show that differences in the use of grammar, spelling and punctuation conventions between 1984 and 1996 are primarily in the direction of improvement at grades 8 and 11. However, fourth graders show a decrease in one kind of error but an increase in three other kinds of error.

Tyson (1999) presents a study in which he examines if the 14 junior English majors in his advanced writing course motivated by use of computers and which activities they found motivating and useful. The results show that students take more interest in both content and mechanics; revise more and more carefully. Diamond (1997) investigates the attitudes of language program students, teachers and administrators concerning the effectiveness of Computer-Assisted Language Learning (CALL) instruction for adults. She concludes that CALL effectiveness can be enhanced by the development of pedagogically-based courseware, the integration of courseware into existing curricula, the investment in teacher training, balancing live instruction and CALL and the recognition of the importance of the

human element in all forms of training. Whereas, Jacoby (1993) investigates the utility of computer-assisted English second language instruction for limited-English-proficient secondary school students in a system in which there has been no regular bilingual or compensatory education offered. The results show that students within the target group have demonstrated a willingness and ability to master word processing competence.

On the same road, Rafoth and Rubin (1984) assert that mechanics have a greater influence on raters' judgments of student writing than either content or rating instructions. Their findings suggest that evaluators may not be able to focus on individual criteria of writing quality. The results of an error analysis of written composition made by Habib (1982) indicate that the secondary stage students have had many spelling mistakes. Teaching by more than one restricted method is a suggested solution to the problem. Similarly, Hassan's study (1978) results in the fact that Egyptian EFL students of the Faculty of Education have suffered many problems concerning the appropriate usage of punctuation conventions, articles and sentence structure.

On the contrary, Jinkerson and Baggett (1993) have asked two groups of 9- to 11-year-olds to find and correct spelling errors, one using a typewritten story and a dictionary, the other viewing the story on a computer monitor and utilizing a spell-checker program. Although error detection rates are higher in the spell checker group than in the dictionary group, efficiency and spelling knowledge are identical.

Similarly, Allen (1976) has used a sample of 412 secondary school English teachers from 42 schools. The purpose is to study the effect of

selected mechanical errors on teachers' evaluations of non-mechanical aspects of students' writing. There are no significant differences in the mean content ratings for the four versions of the writing sample used neither in the study nor between the ratings of junior and senior high school teachers. For all four versions of the writing sample, there are significant correlations between the total score and the sub-scores for both mechanics and content.

The previous survey indicates a controversy in the results of the previous related studies especially in regard to the programs, strategies and techniques used for developing mechanics of writing. While some studies result in significant differences between the experimental and the control groups and that the experimental one develops more, other studies indicate either no problem or no significant differences between the two groups. This controversy itself is an indicator of the problem existence and a strong justification for the study at hand to fill in a gap among its predecessors.

All the above mentioned resources assure that there is a problem. This problem can be presented by the following principal question:

*** Does the suggested CALL program affect the development of EFL learners' mechanics of writing?***

The Sample

In order to answer this question, eighty fourth-year students of English Department in Kafr El-Sheikh at the Faculty of Education are to be randomly chosen. They will be randomly divided into two groups: the control group and the experimental group. The experimental group will study the specified content using the CALL program, while the control one is to study it as usual. Each group will

contain forty subjects. The 4th year students of the English Department are chosen because they are supposed to have achieved a good mastery of mechanics of writing.

Research Sub-questions

The following sub-questions branch off the above stated principal question:

1 – Is the suggested CALL program effective for developing EFL learners' English punctuation conventions?

2 – Is the suggested CALL program effective for developing EFL learners' English capitalization?

3 – Is the suggested CALL program effective for developing EFL learners' English spelling?

4 – Is the suggested CALL program effective for developing EFL learners' mechanics of writing as a whole?

Research Hypotheses

The following hypotheses are formulated to be tested:

1 – There is no significant difference between the posttest mean scores of the treatment group learners and those of the control one on English punctuation conventions.

2 – There is no significant difference between the posttest mean scores of the treatment group learners and those of the control one on English capitalization.

3 – There is no significant difference between the posttest mean scores of the treatment group learners and those of the control one on English spelling.

4 – There is no significant difference between the posttest mean scores of the treatment group learners and those of the control one on the mechanics of writing test total score.

Significance of the Study

This study is significant for:

[1] EFL Learners

The study at hand basically aims at developing EFL college learners' mechanics of writing. As a result, it enables those learners to write good essays.

[2] EFL Professors

For EFL professors, the suggested CALL program offers a modern alternative tool in teaching the mechanics of writing as a part of the essay course taught to English Department fourth-year learners.

[3] Policy Makers and Curriculum Designers

Policy makers and curriculum designers can make use of the present study in the sense that they can activate the suggested CALL program to be used in colleges, not only for essay courses, but for language development programs for non-specialists as well.

Definition of Terms

► **Computer-Assisted Language Learning (CALL)**

○ According to The Higher Education Computer-Assisted Language Learning Glossary, the term Computer-Assisted Language Learning (CALL) refers to the use of the computer to facilitate language

learning. CALL uses both standard software applications, such as word-processors, email packages and Web browsers, as well as software that are designed specifically for language learning. CALL programs are available for learning grammar, for listening, reading, pronunciation, vocabulary, writing, and comprehension.

○ Cunningham (2000) defines Computer-Assisted Language Learning (CALL) as the application of CAL (Computer-Assisted Learning) to language learning and teaching. Methodologically, it is a highly eclectic field, borrowing from CAL and Applied Linguistics.

* The term CALL, in this study, is limited to refer to a computer program designed by the researcher in order to develop EFL learners' mechanics of writing.

► **Mechanics of Writing**

○ Danielson (2000) regards mechanics of writing to be "standard writing conventions such as spelling, punctuation, capitalization, and sentence structure skills."

* Mechanics of writing in this study means the right, standard usage of three categories of writing conventions: punctuation marks [as identified in the ten items of the achievement test], capitalization and spelling.

Scope of the Study

{1} The sample for this study is limited to eighty subjects of the fourth-year EFL learners of the English Department at the Faculty of Education in Kafr El-Sheikh.

{2} The CALL program refers to that one designed by the researcher as an independent variable.

{3} This study is limited to the following components of writing mechanics as a dependent variable:

- Punctuation Marks (The ten marks identified in the achievement test)
- Capitalization.
- Spelling.

{4} The content of this study is confined to a part on mechanics of writing that is included in the essay course taught to the EFL fourth-grade learners of English Department in the Faculty of Education at Kafr El-Sheikh in the first semester.

{5} The study is to be applied during the first semester of the college year 2006 / 2007.

Research Tools

● A pilot study (prepared by the researcher) to confirm the existence of the study problem.

● A pre-posttest (prepared by the researcher) in mechanics of writing administered to all subjects of the sample before and after the experiment.

● A questionnaire (prepared by the researcher) for measuring to what extent the experimental group estimates the program.

Research Material

- A CALL program (designed by the researcher) used to develop learners' mechanics of writing.
- A lecturer's guide (prepared by the researcher) for using the suggested CALL program.

- A student's guide (prepared by the researcher) for using the suggested CALL program.

Research Procedures

● Searching the previous related studies.

● Preparing the study tools.

● Administering the pretest.

● Applying the designed CALL program.

● Administering the questionnaire.

● Administering the posttest.

● The statistical analysis of data using suitable techniques.

● Discussion of the results.

●The study recommendations and suggestions for further research.

CHAPTER TWO
REVIEW OF LITERATURE AND RELATED STUDIES

In order to be systematic in handling the related literature, this chapter is divided into two parts. Part One is organized in the form of subtitles each of which tackles a certain area. Then, Part Two follows. It contains two sections: Section One that surveys some studies related to the mechanics of writing, and Section Two which handles some studies related to the application of Computer-Assisted Language Learning (CALL) in writing teaching and learning.

Part One

Writing: Definition and Sub-skills

Writing refers to "the domain of language proficiency that encompasses how students engage in written communication in a variety of forms for a variety of purposes and audiences." (WIDA Glossary, 2005). As for the sub-skills branching off the umbrella term of writing, Kenworthy (2004) states that writing skills are simply represented in: generating ideas, organization and mechanics.

Archibald (2001) defines writing as a multidimensional skill requiring knowledge and proficiency in a number of areas. Its complexity results from the interaction of the writer's knowledge, experience, skills and identity with the norms and cognitive demands of the task at hand.

The researcher defines writing as a language productive basic skill that requires motor as well as thinking abilities, and implies such sub-skills as topic sentence formation, text organization and mechanics.

For social constructionists, writing is a social act that can only occur within a specific context and for a specific audience (De Larios and Murphy, 2001).

Cumming (2001) points out that the process of writing in a second language involves three dimensions:

(a) features of the text that people produce,

(b) the composing processes that people use while they write

(c) the sociocultural contexts in which people write.

Each dimension has a number of micro and macro sub-skills. The following table sums up these dimensions and their sub-skills:

Table (4): What does a person learn when writing in a second language? Cumming (2001: 3)

Writing Sub-Skill *Dimensions*	*Macro*	*Micro*
Text	Cohesive devices	Syntax and morphology
Text	Text structure	Lexis
Composing	Planning	Searches for words and syntax
Composing	Revising	Attention to ideas and language concurrently
Context	Participate in a discourse community	Individual development
Context	Social change	Self-image or identity

Writing sub-skills, as defined by Mayhew (2000), are skills contributing to effective communication by written means. They may be characterized as either "soft" ability-driven skills such as writing style, or "hard" technical skills such as use of pen and paper or Information Technology (IT).

Orwig (1999) also defines writing as the productive skill in the written mode which is more complicated than it seems at first, and often seems to be the hardest of the skills, even for native speakers of a language. According to her, this skill has a number of such "micro-skills" as the correct use of orthography, including the script, spelling and punctuation conventions; the correct use of vocabulary; the appropriate use of style to the genre and audience and so on.

Bello (1997) argues that writing is a continuing process of discovering how to find the most effective language for communicating one's thoughts and feelings. It can be challenging, whether writing in one's native language or in a second language. Yet, as adult English as a second language (ESL) learners put their thoughts on paper, see their ideas in print, and share them with others, they find that they develop a powerful voice in their new culture.

Similarly, Penningon (1995) defines writing skill as a form of expertise requiring the development of cognitive structures and routines for high-level management and coordination of many different types of physical and mental activity, towards the ultimate goal of expressing the writer's intended meaning.

Another classification of writing sub-skills divides them into comprehensibility skills including understanding that writing is communicating messages or information; fluency skills containing: recognizing the linear sequence of sounds, mastering writing motions and letter shapes, recognizing the chunking of words, recognizing the need for space between words and writing quickly and creativity skills including the ability to write freely anything the learner wants to write (Hampton, 1989). Writing is – as Mandell and Mandell (1989) state –

a demanding activity requiring higher-order thinking and organizational skills as well as mechanical skills. The specific skills of writing they have highlighted are identifying a stimulating topic, selecting clarifying vocabulary and using correct spelling and appropriate punctuation and capitalization.

Teaching Writing: Why?

Linking the purposes of teaching writing to the different psychological and instructional theories, Foong (1999) points out four purposes for teaching writing:

Writing for Language Practice

Writing can be taught primarily for practicing language forms to develop accuracy and correctness. This purpose results from the behaviorist theory which assumes that humans can learn through stimulus and response. With the influence of behaviorist theory in the audio-lingual approach to teaching language, writing is mainly for reinforcement, training, and imitation of language forms.

Writing for Rhetorical Practice

Research in contrastive rhetoric has hypothesized that the rhetorical patterns can differ between languages and cultures. Students learning a second language may organize their essays using a pattern that could violate native readers' expectations. As a result, the teaching of rhetorical forms and conventions begin to have its influence on language textbooks and teaching practices. In writing tasks that teach rhetorical forms, teachers provide the content and use model essays as stimuli for writing. Students will imitate the rhetorical and syntactic forms by following the chosen model passage. Examples of such tasks are writing guided compositions in which the content and organization

are given by the teacher, reading a passage and writing a composition with parallel organization, and reading an essay and analyzing its organizational pattern and writing a similar essay on a related topic.

Writing for Communication

With the emphasis of communicative competence as a goal in language learning, teaching of writing has begun to shift its emphasis on accuracy and patterns to the ability to understand and convey information content. Completing a communicative writing task will require greater awareness of the writer's purpose, audience, and the context of writing. Here writing has a social function. Such communicative writing tasks will simulate real life situations where a writer will write to convey some information to a reader.

Writing as a Discovery and Cognitive Process

In response to the limitations in both the language-based, product-based, and communicative approaches to teaching writing, writing tasks in the classrooms have begun to shift their focus to the process of writing which has been influenced by the humanistic and cognitive approaches. The process approach has two main schools of thought: the expressive and the cognitive.

The expressive school of thought stresses the importance of self-development. Writing is viewed as an expressive mode through which student writers use writing as a means to explore or discover meaning by themselves and develop their own voice.

With the influence of cognitive psychology, writing researchers begin to study the mental processes during the act of composing. From the studies of composing processes using protocol analysis, researchers find that good writers do not only have a large repertoire

of strategies, but also they have sufficient self-awareness of their own process to draw on these alternative techniques as they need them. In other words, they guide their own creative process.

Generally speaking, Carroll (1990) assures that writing is the most important invention in human history because it provides relatively permanent record of information, opinions, beliefs, feelings, arguments, explanation, theories, etc. Moreover, writing allows us to share our communication not only with our contemporaries, but with future generations as well. It permits people from the near and far-distant past to speak to us. Therefore, writing has to be stressed. He also argues that students dislike writing for writing is often taught in such a way that students' failures, rather than successes, are focused on. The writing process is learned in an environment of constant criticism and repeated failure to the extent that some teachers even use writing as a form of punishment.

Chastain (1976) discusses the role of writing in second language learning. In his opinion, writing is a recognized objective among most language teachers, and as such, it should be emphasized in a classroom. The ability to write is recognized in society and in the schools as an important objective of language study. That is why a method in which there is no writing practice will be suspect from the traditional point of view. Traditionally also, the students associate homework with a written assignment.

The rationale of teaching and learning writing further handled by Chastain is that writing helps to solidify the students' grasp of vocabulary and structure. Besides, it complements the other language

skills; and since writing is one of the productive skills, it demands learning at a more profound level.

Writing: Stages

On writing an essay, a learner goes through different stages. Most researchers divide the process of writing an essay into three stages: prewriting, writing, and revising. In prewriting, a writer thinks about his subject and purpose and organizes those thoughts onto paper. At the end of the prewriting stage, a writer should know what he wants to say and how he wants to organize his points. During the writing stage, a writer puts down those points, including a brief introduction and conclusion. After a writer has finished writing, he should have some time left for revising. In this stage, he reads his essay to see if it covers the basic points thoroughly, provides good support, gives the reader a sense of direction or organization, and avoids grammatical and mechanical errors. (Hale, 2006)

Davison et al. (2004) identify a four-stage writing model that includes:

- *Drafting* (getting ideas down on paper or computer screen, regardless of form, organization or expression).
- *Redrafting* (shaping and structuring the raw material – either on paper or on screen – to take account of purpose, audience and form).
- *Rereading and Revising* (making relations that will help the reader: e.g. getting rid of ambiguity, vagueness, incoherence or irrelevance).
- *Proof-reading* (checking for errors: e.g. omitted or repeated words, mistakes in spelling or punctuation).

Birjandi et al. (2004) also identify four distinct phases of good writing. However, they carry different names from Davison's model. Birjandi et al.'s phases of good writing are: **(a)** pre-writing, **(b)** organization, **(c)** support and **(d)** grammar and mechanics. In the pre-writing phase, a writer should *think before writing*. He should do the following:

    A. think about the subject of his writing carefully.

    B. narrow down the subject.

    C. write a topic sentence which includes the topic, opinion or intent, and some controlling ideas.

Prose is linear in the organization phase. Therefore, a writer must be able to:

    A. organize his essays clearly.

    B. begin and end his writing thoughtfully.

    C. make relationships between ideas clear.

    D. move from one sentence to another and from one paragraph to another smoothly.

In the support phase, a writer must show the readers that what he writes is true so that they will believe him. He must learn how to:

    A. support his topic sentences.

    B. differentiate between topic sentence and supporting sentences.

    C. use appropriate evidence in supporting his ideas.

    D. use appropriate methods for supporting his claims.

Grammar and mechanics phase requires a writer to:

    A. use language with precision.

    B. avoid common errors of grammar and usage.

C. make his writing strong through revision.

Viewing writing as a process, Singh and De Sarkar (1994) depict three stages of writing:

- **Pre-writing**

In this stage, students are asked to be clear about the message they want to convey, consequently they spend a good amount of time planning the content of their composition. Planning related to content, structure, emphasis and procedure helps students monitor the organization and development of their ideas.

- **Writing**

In writing stage, students are encouraged to make decisions regarding the specific content to be included in their text. They set out to give shape to the skeletal structure prepared in the pre-writing stage, considering (1) how content is given linguistic expression (through definition, description, explanation, comparison, etc.), (2) how thought connectors are used, (3) how formal discourse is organized and (4) how subheadings, diagrams and tables can be used in the final layout.

- **Post-writing**

Students critically re-examine their first draft for editing.

A different model presented by Qiyi (1993) suggests that writing as a whole process includes six stages: experience and question, prewriting preparation, draft writing, editing and rewriting, publication or sharing and response and feedback from the readers.

Unlike Qiyi's model, Singh (1992) reduces the stages of the writing process to sequential phases: planning, drafting and revising. Each

stage of the writing process presents different problems and therefore requires different skills to solve them:

Table (5): Writing Process Sequence Singh (1992: 45)

Focus	Function	Activities
1st stage: Planning		
1. Input	motivation and starter to the writing task	generating ideas through brainstorming, discussion, research, making notes on handouts
2. Types of writing, purpose and subject	definition of writing goals	surveying possibilities and constraints
3. Writing strategy	mapping out an approach	deciding on ways of handling the task
a) Organization	selecting of text structure	deciding on overall presentation and logical ordering
b) Information	selection of a text content	narrowing down content and choosing appropriate information to suit aims and ideas developed so far
2nd stage: Drafting		
1. Text evolved so far	recall of what has been written	re-reading the text
2. Coherence of ideas, organization, argumentation, content	assessment of how well the text "hangs together"	locating and examining problems: changing, deleting, and/or adding
3rd stage: Revising		
1. Cohesion, Syntax and vocabulary	general improvement of the text	checking, changing, deleting, and/or adding to these surface features of the text
2. Spelling, punctuation	correction of mistakes	noting mistakes and eliminating them
3. Purpose, argumentation	re-assessment of effectiveness of the text	estimating effect on the reader and the effectiveness of the text for the intended purpose; rewriting if necessary

Clifford (1991) also depicts three main stages of writing in the following diagram:
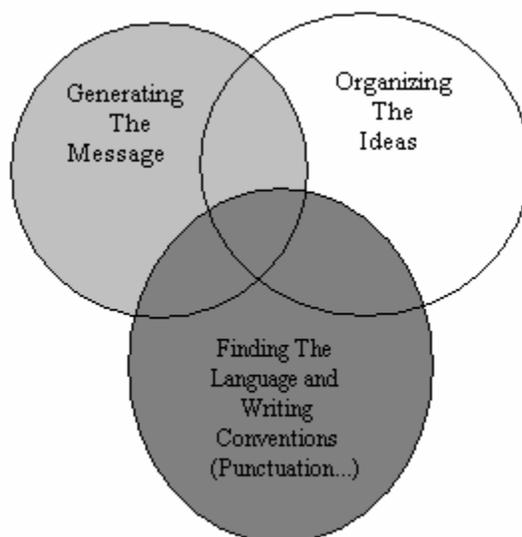
Figure (1): Writing Main Stages (Clifford, 1991: 41)

The circle on the left refers to the initial stage in starting to write; which is to generate a message, the ideas and the content. The second circle, on the right, refers to organizing these ideas to suit the writer's purpose. The final circle, at the bottom, refers to the tools used to convey this desired message: e.g. the vocabulary, syntax, morphology, punctuation…etc. These circles (stages) overlap to give a sense of the interactive, dynamic nature of the writing process.

Writing: Different Approaches and Techniques of Teaching

(Davison et al., 2004: 150) recommend the following range of effective teaching styles for teaching writing:

- **Direction**: to ensure pupils knowing what they are doing, and why;
- **Demonstration**: to show pupils how effective readers and writers work;
- **Modeling**: to explain the rules and conventions of languages and texts;
- **Scaffolding**: to support pupils' early efforts and build security and confidence;
- **Explanation**: to clarify and exemplify the best ways of working;
- **Questioning**: to probe, draw out or extend pupils' thinking
- **Exploration**: to encourage critical thinking and generalization;
- **Investigation**: to encourage enquiry and self-help;
- **Discussion**: to shape and challenge developing ideas;
- **Reflection and Evaluation**: to help pupils learn from experience, successes and mistakes.

It is added that modeling and providing the scaffolding of writing frames are the most commonly used techniques for supporting pupils' writing. The value of both techniques is that, when used well, they make explicit how the relationships between productive writing processes and the requirements of particular genres are worked through by successful writers in the course of their work.

A worthwhile remark is that effective modeling means more explaining the rules and conventions of language or texts, or simply presenting pupils with what may be quite intimidating examples of successful work by others. The most effective modeling practice

involves the teacher showing pupils how he or she would undertake a writing task or a particular part of it. Such tasks include annotating a text, brainstorming ideas, developing a set of topic vocabulary, organizing ideas into a table or diagram, selecting and discarding material, sequencing points and finding examples or illustrations from a text or writing an opening paragraph.

The Cognitive Approach to Writing

The cognitive perspective views writing as a problem-solving task and emphasis is placed on the complex, recursive and individual nature of this task, independent of cultural and historical influences. Cognitive processes are seen as generalisable to a range of contexts and are ultimately rooted in the conduit metaphor which conceives of minds and language as containers into which writers insert meanings to be subsequently unpacked by readers.

The Socio-cultural Approach to Writing

In contrast with the cognitive approach, the socio-cultural approach to writing does not understand writing as consisting of invisible processes occurring within the writer's mind, but rather as the situated activity of socio-historically constituted people who are dependent on their material and interactional circumstances. In other words, writers' knowledge is depicted as interacting with a particular writing context. The language, the focus and the form of a text are determined for the writer by the discourse community for whom he / she is producing the text (De Larios and Murphy, 2001).

Bello (1997) suggests that there are two general approaches to writing: free writing, which is not necessarily edited or worked on further, and process writing.

In case of free writing, learners write for a period of time in class on a topic of interest to them. This writing can take many forms, including quick writings, which are time-limited, done individually, and not always shared; and dialogue journals, written to a teacher, a classmate or other partner who then responds. These writings may be kept in a portfolio or notebook. From these pieces, themes may emerge that can act as springboards for more extensive writing that is discussed, revised, edited, and published.

Process writing usually begins with some form of a "pre-writing activity" in which learners work together in groups to generate ideas about a particular topic. This can include sharing the free-writing piece, brainstorming, making a list or timeline, or simply reflecting on an experience. Each group member then works alone to compose a "first draft," concentrating on getting ideas down on paper, without worrying about spelling or grammar. They then read their drafts to each other in pairs or small groups. They encourage each other with constructive comments and questions as they seek better understanding of what each other is trying to write.

They may discuss the purpose of the writing, what the author learned or hopes others will learn, and what the reader likes best or has trouble with. "Revising" begins based on these comments and responses. Now the main concern is clarity, as the writer looks at organization and sequencing of ideas, the need for additional information or examples, areas of confusion, and words or phrases that can make the writing clearer. Revisions should be shared until the ideas seem clear. Then, "editing" can begin as the focus moves to spelling, grammar, punctuation, transition words (first, next), and

signal words (for example, another reason is...). Learners should be encouraged to edit what they know or have studied.

Miller (1991) describes an approach to third-year college-level literature instruction that used an informal technique to student writing. The teacher begins with classroom exercises to build peer relationships and shares student attitudes and concerns about foreign language literature study. Subsequently, the class reads short stories, poems, and one-act plays, and each term reads one longer classical work. In class, students analyze the actions within each work and write brief journal statements of their perceptions of the works. As the quarters progress, the assigned journal and free-writing tasks encourage movement up the proficiency scale. Students share their writing with each other and organize and review their own journals at the end of the term.

Being more systematic and comprehensive in identifying the various techniques of teaching writing, Aboderin (1984) specifies three main techniques for teaching writing:

Controlled Writing

Controlled writing includes six subordinate techniques which can be as follows:

1 – *Copying*

Copying is the type of writing practice that makes the smallest demand on students. But it is important and useful as a means of introducing students to writing. Teachers should take great care in selecting suitable passages for students to copy. After students have done the copying, teachers should go through the passage with students, and have them correct errors of omission, punctuation,

capitalization and spelling. Such practice will train the students to be careful when they write, and also to endeavor to read through the finished work before turning such work in for the teacher's assessment.

2 – *Gap Filling*

Gap filling is a more demanding composition assignment than copying. In gap filling, teachers can begin by allowing students to see and read through the passage once or twice. The passage (which should be on a portable chalkboard) should then be replaced by a passage with gaps to be filled in by the students. For each gap filling exercise, emphasis should be on a particular grammatical element such as subject, verb, object, adjective, etc. The gap filling exercise can be corrected by the students when the original passage is displayed once again. The practice, like the copying exercise, will train the students to take note of acceptable sentence structures, spelling, punctuation and capitalization. A more advanced stage is the assignment of a passage with which students have had no prior contact – an example of the cloze procedure.

3 – *Controlled-Composition Frame*

The controlled-composition frame is an exercise designed to give students practice in putting various segments together to form complete sentences. A number of sentences can be put together from the given frames to form paragraphs.

4 – *Writing Down*

Writing down is a controlled composition method that requires the teacher to read a short story or passage (i.e. the composition) to the students. The students may first listen to the story without writing

anything down. They are expected to write down the story during the second reading. A third reading might also be provided, so that students may correct possible errors of omission, spelling or punctuation. The teacher can prerecord the passage in order to ensure good reading. Such a recording can be played back many times and there will be no variation in stress and articulation. The practice of having the students write down a story from dictation provides opportunity for listening to good sentence structures, and matching letters with sounds. The method thus provides the students with practice in anticipating syntactic elements as well as in spelling correctly. Students will be required to make their corrections when the written form of the story (or passage) is mounted.

5 – *Picture Reading*

Picture reading requires original sentence construction by the students. The subject matter of the composition is provided by the pictures mounted by the teacher. To be able to interpret the scene in a coherent manner, students will have to fall back on their visual perception, their experience based on familiarity with the scene presented, and their power of imagination. Newspapers and magazines provide good material for picture reading exercises. The teacher will have to hunt for suitable pictures and cartoons. Such pictures can be cut out and stored for use when required. Picture reading is a way for gradually removing the control thus far exercised by the teacher on student composing. It challenges students to construct their own sentences and so prepares them for independent composition assignments.

6 – *Sentence Combining*

Sentence combining is a technique for training students to improve on their sentence construction. The teacher should help the students see the relationship between sentences so that they may avoid expressing in two sentences ideas that can be coherently expressed in one.

✎ Guided Composition

Guided composition involves discussion of the topic, with outline points written on the blackboard, before the pupils are asked to write. The discussion provides the relevant experience that students will express in their composition. Opportunity is also given for the pupils to learn the appropriate words, expressions and arrangement for the assignment.

✎ Free Composition

Free composition should not be taken to mean that students are free to write on any topic of their choice. Rather, the students are free to express whatever ideas they have about a given topic. Many school situations impose control through the assignment of a specific topic or topics. Students have freedom of choice only when many topics are provided. But even at this free-writing stage, it is still important to provide students with relevant experience through discussion, excursion and sensory and memory cues.

Writing: Techniques of Testing

The rating of writing has been the subject of an enormous volume of research. Davison et al. (2004) discuss three types of writing evaluation:

Peer Evaluation

Peer evaluation can be guided by prompt questions established by the teacher, or in negotiation, which draw attention to matters such as the total impression a piece of writing is intended to make on readers, and the effect it actually has; specific strengths in relation to matters such as its use of genre, its selection of content; general points which the writer could address in redrafting and revising the text and the like.

It is always useful if the teacher can intervene in peer evaluation processes and respond to self-evaluation before the writer takes action, both to provide further advice and to monitor the responses which are being made to writing. Students' comments can be highly informative about the writing development of those who make them.

Self-evaluation

Self-evaluation is especially valuable when learners produce particularly sensitive or personal writing, or when they use genres such as poetry, in which they may invest a great deal of emotion but have difficulty with technical matters. The self-evaluation forms a kind of objectification of the personal, and the teacher needs to pay attention not only to the quality of the work, but also to the extent to which the writer is able to distance himself/herself from the content, in deciding how to respond.

Teacher Assessment

Teacher assessment of writing should also draw attention to the issues indicated for peer and self-evaluation. Positive achievements should always be identified and the teacher should then target a limited and manageable number of areas for further development.

The point Davison et al. (2004) are after is that formative assessment and evaluation of writing should take the form of a developmental dialogue between teacher and students and among groups of students.

Narasimha (2000) argues that the testing of writing skill in the context of second/foreign language learning should begin from the formation of characters to the testing of the learners' proficiency in expression, use of appropriate styles, vocabulary and accurate use of the structure of the target language. She discusses a number of testing techniques of writing skills:

🔵 **Pre-writing Tests**

The first step for a second language learner in the case of mastering the writing skill is that he / she should be familiar with the graphemes of the target language. The basic procedure of testing the aspect of character formation is simple copying in which the learner tries to reproduce the written model as closely as possible and at a slightly later stage, quick copying is undertaken in the process of which learner copies the material as fast as possible, while the legibility is maintained.

🔵 **Partial or Spot Dictation**

In partial or spot dictation, each learner is given a copy of a passage in which function words or even only prefixes and endings are left out. While the passage is read by the examiner or the teacher, the student has to fill in the blanks. Although such exercises require a lot of advance, they have some merits: for example:

1. They can be administered quickly and the scoring can be more objective.

2. The examiner or the teacher can test only the problem areas.

3. The learners need not waste time in writing words, phrases etc., that they have already mastered.

🔵 Prepared Dictation

Prepared dictation is nothing but dictating a familiar or a known passage, conversation or dialogue. The learner will have had the opportunity of either listening or reading the piece during the course of language instruction that he may have undergone. This kind of dictation is normally recommended in the initial stages of the introduction of the writing skill. If the teacher or the examiner wants to measure the learners' retention and familiarity with the patterns, each sentence should be read only once and at a normal speed. Such exercises have proved to be more effective in the case of older students.

🔵 Paraphrased Dictation

In this type of exercise, the dictated material will be nothing but a gist of a dialogue or a selection that the learner is already familiar with. The dictated paraphrase will however contain only the familiar patterns and vocabulary that the student possesses, but the wording will not be exactly the same as contained in the original dialogue or the selection. For this reason, the validity of the test and its results will be greater in assessing the learners' language achievements than the prepared dictation. In this type of dictation, reading of each sentence is normally allowed once or twice at a normal speed.

🔵 Dictation of Unfamiliar Material

The dictation of a material unfamiliar to the language learner is usually preferred to the other types of dictation at the intermediate and

advanced levels and they are considered to be more reliable and valid to measure the learners' skill in dictation. The following procedures are followed in giving such dictations. First, the whole passage is read at normal speed. Then the students are expected just to listen carefully and not to write. The passage is then read for a second time when each phrase is read at a time giving appropriate pauses during which the students are expected to write down what they have heard. The second dictation should be consistent and the teacher may read each phrase during which the students are expected to write down what they have heard. The teacher may read each phrase once or twice. After the dictation of the passage is over, it is read finally again at a normal speed and the students are given a few minutes' time for the final revision. The teacher must ensure that no part of the passage is read at the request of the learner. In order to ensure consistency in reading and save the teacher's time etc., such dictations are recommended to be given through language laboratory where such facilities exist. In this case the examiner must ensure that the students do not play the tape a second time.

● **Partial Sentences**

Partial sentence items necessitate the learner to complete the phrase given in the test. These items differ from the usual "fill-in the blank" type of items in the following ways: The dictations of partial sentences may contain the use of both the target as well as the source languages, whereas the usual fill-in the blank type of items does not contain the use of both the languages. At the initial or elementary levels of language instructions, it is desirable to avoid partial sentence items in which the verbs to be employed are given in the infinitive.

Following are some of the types of partial sentences given for testing:

1) One of the ways in which this can be used is to have a blank only for a part of the word generally in the case of the verbs and ask the students to fill in the blank with appropriate parts of words.

2) Instead of leaving a part of a word blank, it is also possible to give such test items leaving the whole words as blank and the learner is expected to fill in the appropriate word to maintain the accurate structure and proper meaning.

3) It is possible to give the completion items leaving phrase or clause blank, providing cue words by making use of which the phrase or clause that can fit into the blank can be made out by the learners and the blank filled in. Items of this type require some manipulation on the part of the learners.

🔴 Directed Sentences

One of the important aspects regarding the acquisition of the writing skill is the ability of a learner to write sentences as directed. Under this type of test items, all the kinds of drills and exercises involving various types of substitutions and transformations can be made use of. This type of testing, involving various sentence patterns, should be dictated only after ensuring the learner's mastery of the patterns in the target language. The varieties of test items that can be included under this category are the same as the ones included under the vast variety of drills and exercises used in class room teaching. In addition to these varieties, an effective way of testing writing skill may be by asking the learners to construct sentences from the cue

words given. The cue words may contain nouns and pronouns in their nominative forms and the verbs in their infinitive forms.

⬤ **Composition**

It is at a higher level of language instruction that writing composition becomes very important. While the writing of composition requires the leaner to assimilate and arrange his ideas in a sequential form, it also necessitates the learners' ability to use accurate structures and appropriate vocabulary. This also requires the student's ability to use the kind of style that is required to make the composition more effective and meaningful. Thus composition measures the learner's ability to organize his ideas, choose proper vocabulary and to formulate grammatically correct sentences. While the composition tests the learner's ability of using accurate structures and appropriate vocabulary, it also tests the learner's communicative competence in the target language by examining the sequence of thoughts and ideas and the use of style in composition.

There are mainly two types of compositions:

1. Guided Composition
2. Free Composition

1. Guided Composition

In the guided composition the examiner gives a number of words to be made use of by the student in a sequential order and produce a passage or a paragraph arranging the ideas in a proper sequence, the hints of which can be obtained from the way in which the words are given. Diagrams or pictures, cartoon strips, phrase and/or structural patterns can also be used for providing guidance to the examinee to produce a guided composition.

2. Free Composition

In the case of free composition, no such clues or key words are provided, but the student is given a topic on which he has to write a small passage or a paragraph. The topics should, however, be familiar to the learner. Such topics as may have been presented in the course of language learning through the textual material may be given at the intermediate level of language instruction, but at the higher level of language learning the topics may be familiar but need not necessarily be only those which have appeared in the instructional material.

Translation

Some scholars have advocated the use of translation as a testing device. Such tests consist of the sentences or paragraphs or passages from the source language which are required to be translated into the target language. The preparation of such tests is no doubt easier, but their validity has been questioned particularly in the recent past. The translation may indicate the range of vocabulary that a learner possesses in the target language. In case the learner is unable to recall the target language equivalent of the source language words, he will fail to demonstrate his ability to use the structure of the target language. Therefore, in the testing of language proficiency of beginners or intermediate students, the teacher obtains more valid results in the testing of vocabulary and structures separately.

In the case of advanced students, who are fairly familiar with the vocabulary and structures in the target language, the exercise of translation from the source language to the target language becomes an exercise. Therefore, translation becomes more valid and reliable in

the case of advanced language learners. Translation may be made use of for the testing of accuracy and literary expression also.

Lyons (1995) points out that when we assess writing, we engage in another complex and multifaceted activity: judging another person's text. The task is considered not to be easy because into the text has gone not only that person's grammatical ability, his reach of word knowledge and control, his sense of what a unified subject is, his factual knowledge about the subject, but also his understanding of the world and his place in it, his exploration of ideas and his feelings.

Moreover, Lyons (1995) adds that judging writing depends on the context. He depicts the following techniques of rating nonnative writing:

⬤ Holistic Scoring

The conventional form of holistic scoring involves two readers for each text, each giving a fast, impressionistic reading, with a third reader if these two disagree. The two / three readers' scores are summed or averaged to arrive at the final, single-number score. However, holistic scoring provides insufficient information for many writers due to the fact that the writing of second language English users is particularly likely to show varied performance on different traits, (such as

ideas, grammar, organization and register) and if we do not score for these traits and report the scores, much information is lost.

⬤ Multiple Trait Assessment (MTA)

In multiple trait assessment (MTA), an essay test structure is developed within a context by a careful, detailed iterative process, ideally by a group rather than a single "expert". From a set of fully

specified descriptors of writing performance / characteristics along traits (criteria) discovered to be salient in the context and at a range of levels appropriate to the context, prompt type is specified, and appropriate scoring criteria and standards are developed.

Writing Problems Facing EFL College Learners

Hilton et al. (2007) classify the writing problems that face EFL college learners into:

🔘 **Mechanical Problems**

Punctuation, spelling, and grammar are the most common mechanical problems that face college EFL learners. Unless the course objectives specifically provide for developing writing proficiency, the lecturer's grading of written assignments will be based primarily on content and mastery of the material. Effective communication is an essential factor in any subject, however, and helping students learn to communicate is an important part of every teacher's responsibility. Since errors in punctuation, spelling, or grammar may seriously affect the meaning of an essay and will detract from the credibility of the writer in the mind of a discerning reader, it should be made clear to the students that mechanical errors will adversely affect their grades.

🔘 **Organizational Problems**

Organizational difficulties may also be a serious problem for EFL college learners, even for those students possessing a perfect command of spelling, punctuation, and grammar. Problems in organization may be dealt with more easily at the time the professor gives an assignment by clarifying his / her expectations regarding organization and content. It may be helpful to prepare a brief handout including suggestions as to the type of information that should be

included in the introduction, how the body of the essay could be constructed, and how to develop a meaningful conclusion. Examples of well-written papers from the professor's discipline may also help his / her students grasp the characteristics of good organization.

For preventing the above mentioned problems, Hilton et al. (2007) suggest that a part of a lecture period should be devoted to a discussion of composition and having the students review their papers with the professor at various stages of completion which may also forestall major problems. No matter how important students' ideas may be, they can be rendered invalid by careless, incoherent writing. Anything professor can do to help his / her students to express themselves more clearly will constitute a major contribution to their education. Because of time constraints, professors may be unable to deal with all writing problems. They may wish to refer their students to other campus resources for assistance.

Abd El-Fattah (1995) surveys a variety of problems that face Egyptian EFL university learners in composition writing. These problems are summed up as follows:

- The shortage of books and references related to composition writing.
- Writing on topics that do not relate to learners' daily lives.
- Highlighting learners' errors which results in frustration.
- Lack of variation in composition teaching techniques used by teachers.
- Lack of feedback and evaluation neglection.
- Crowdedness and large classes.

Mechanics of Writing

Mechanics of writing is a writing sub-skill. Norman et al. (2005) define it as the sub-skill that includes such things as punctuation, spelling, abbreviations, acronyms, numbers…etc.

"The term 'mechanics' refers to the processes involved in getting words into print-handwriting or typing, spelling, grammar and formatting." (Smith, 2003: 2).

Similarly, Sun (2003) simply states that mechanics of writing specifies the established conventions for words that one uses in his / her documentation. These conventions include capitalization, contractions, gerunds, participles, numbers, numerals, pronouns, technical abbreviations, acronyms, units of measurement and punctuation marks.

Mandell and Mandell (1989) argue that mechanics of writing covers many points the most important of which are capitalization and punctuation usages.

On the contrary, Leggett et al. (1985) define mechanics as those practices of written English which are merely conventions unjustified by logic; they, rather, represent standard ways of doing things. They include only manuscript form, numbers, abbreviation and syllabication. Warriner (1982), however, has a view point that unites all the definitions stated above. He argues that mechanics of writing includes not only capitalization and punctuation but manuscript form as well.

The current study focuses on developing three main components of mechanics of writing: punctuation marks, capitalization and spelling.

Punctuation

Punctuation: Identity and Importance

Punctuation marks are one of the components of writing mechanics. These marks are divided into internal marks – referring to the punctuation marks within the sentence – and end marks – which are used at the end of a sentence or a question. Another classification of punctuation marks divides them into marks within the word – like apostrophes and hyphens, marks between words and end marks. Whatever the classification may be, the majority of literature written in the area agrees on the importance of using correct punctuation marks in one's writing.

"Punctuation helps people read sentences accurately. Internal marks – commas, semicolons, dashes – as well as end punctuation reveal sentence patterns and relationships of clauses and phrases. Incorrect punctuation may create document noise and confusion. Knowing where to punctuate and why contributes to accurate editing." (Rude, 2006: 173).

Michigan (2004) asserts the importance of punctuation marks giving an interesting example to show how these small marks can greatly affect meaning: "I hate liars, like you." and "I hate liars like you." The same meaning is expressed by Angelillo (2002) as she recommends that students should regard punctuation as a primary act of composition and not only a step in editing, and that they should use punctuation as they compose to help them shape meaning.

Gibaldi et al. (1988) argue that the primary purpose of punctuation is to ensure the clarity and readability of one's writing. They add that although punctuation is, to some extent, a matter of personal

preference, there are many required uses; and while certain practices are optional, consistency is mandatory.

Punctuation: Chronological Interest

King (2003) traces the chronological interest in using punctuation marks:

* Two centuries ago, most punctuation took its cues from speech. This was a period when the predominant practice of reading aloud was translated into written punctuation.

* A hundred years on, with increased literacy, the spoken word gave way to the written. The emphasis now was on meaning, and punctuation bowed to a more logical system.

* Punctuation probably reached its zenith in the late 19th century, helping to make sense of the then fashionably interminable sentences.

* Nowadays sentences, due to the brevity of newspaper style, are shorter. Thus, the need for the complicated divisions within long sentences no more exists. Punctuation today is a blend of both: a system capable of conveying force, intonation, urgency, doubt, rhythm, tension and passion, and another system whose duty is to achieve consistency and clarity in meaning.

Capitalization

Capitalization: Identity and Usage

King (2003) regards capital letters to be a form of punctuation in that they help guide the eye and mind through a text. He adds that the common usages of capital letters to start sentences and surnames are clear enough; however, a good deal of mystery surrounds the use of capitals in some other areas of writing.

A worthy note taken by Leggett et al. (1985) is that modern writers capitalize less frequently than did earlier writers, and informal writing permits less capitalization than formal writing.

The same observation about the negligence of applying capitalization standard rules is formerly aired by Warriner (1982) as he refers to the fact that one may very well find examples of capitalization or cases of a lack of capitalization that do not agree with the standard rules in one's reading of books, magazines and newspapers. This fact is attributed to the change of capitalization practices.

Functions of Capital Letters

Capital letters do at least three useful jobs in written English:

1. Capital letters indicate the beginnings of sentences as readers do not have the rise and fall of a speaker's voice to show them when one sentence ends and another begins.
2. They distinguish proper nouns and titles from the other words of a sentence so that readers can grasp the meaning quickly.
3. Capital letters show respect in such sentences as "The Lord is my shepherd." or "The President is speaking on television." (Warriner, 1982: 425-426)

Spelling

What is spelling?

Spelling is defined as the writing of a word or words with all necessary letters and diacritics present in an accepted, conventional order. It is one of the elements of orthography and a prescriptive element of language. As a means of transcribing the sounds of language into alphabetic letters, spelling, however officially

sanctioned, often offers but a rough and inconsistent approximation. (Wikipedia, 2006).

<u>Stages of Spelling</u>

Schulze (2006) outlines five stages of spelling:

📖 **Pre-communicative Stage**

The spelling produced in this stage cannot be read by others. This stage of spelling is sometimes called the babbling stage of spelling where the student attempts to communicate a message but he / she is the only one who can decipher this message. If time is put between the writing of this message and the student, he / she may not be able to transcribe the message. Written language at the pre-communicative stage is characterized by:

- Random strings of symbols, shapes, numbers-some knowledge of letter forms - often called mock letters.
- Knowledge of letter-sound correspondence.
- Some knowledge of the left to right progression of print.
- Capital letters are preferred but the writing sample may include both upper case and lower case letters.

Instruction at this stage should focus on the teacher modeling reading and writing by using reading aloud, writing aloud, language experience stories, daily writing, labeling the environment, and the shared book experience.

📖 **Semi-phonetic Stage**

In this stage, evidence of the alphabetic principle is demonstrated. Spellers know that there are letters in words but they spell words in an abbreviated way. The semi-phonetic speller also illustrates a beginning understanding of phonemes, the sounds that correspond to

the graphemes, and the written letters. Outsiders have difficulty reading the words at this stage. This stage of spelling is characterized by:

- Beginning awareness that letters have sounds and are used to construct words.
- The Letters that are used only represent part of the word. Only one, two, or sometimes three letters are used.
- Initial consonants being used, and in some instances, only consonants are used to represent a word.
- Use of letter names to render their words instead of using consonants and vowels.
- Becoming aware of the left to right sequence of printed language.
- Knowledge of the alphabet and the sounds of language are becoming more sophisticated.

Instruction at this stage should continue to provide experiences that expose students to reading and writing through modeling. Playing with words, patterned language, word walls, language experience, and reading and writing aloud will also be helpful as these students become cognitively aware of how written language operates.

  Phonetic Stage

Phonetic stage is marked by a type of spelling that does not conform to the standard adult spellings, but the spelling is very close and an outsider can decipher the written work. Learners spell words the way they sound. In this stage, the writer becomes aware of the idea that the sounds in words can be rendered phonetically. Some characteristics of this stage include:

- The surface sound features of the words are mapped using the letter-sound correspondence.
- Using the following: vowels, consonants, 'ed' endings.
- Students are consistent at representing certain letters, but these letters may be incorrect.
- Incorrect vowel is inserted after a correct vowel.
- The 'er' syllable is rendered as 'r'.
- Students spell words using how they sound.
- Students are beginning to use word segmentation.

In regard to instruction, the focus in this stage should be on exploring sound relationships (long and short vowels), beginning sounds, rhyming words, phonemic awareness activities, onset-rime, rubber banding words (stretching the word out as it is said aloud), and playing with language.

📖 Transitional Stage

Transitional Stage is the point at which the student is beginning to render more words spelled correctly than incorrectly. This is the stage in which the writer realizes that words must be spelled not only on the basis of how they sound but also how they look. Words rendered during this stage look like 'real' words. The stage features are represented in:

- Following the conventions of spelling: a vowel in every syllable; students use both vowels and consonants.
- Moving from using the sounds of words to the visual representation. Because of this newly acquired awareness; students may reverse letters.
- Students use conventional English sequences in words.

- Students use inflectional endings correctly - s, ing, est.
- Students are beginning to use base words to form new words.
- Students are beginning to use the morphemic relationships of words – (happy, happier, happiest, unhappy, happiness, happily).
- These writers may use 'learned' words in their writing.

Instruction at this level should concentrate on short and long vowels, rubber banding words, consonant blends, spelling strategies, proofreading, plurals of irregular words, words that end with 'er' and 'or', and compound words.

📖 **Conventional Spelling Stage**

This is the stage where the writer is spelling 90% of the words in a written piece correctly. It is at this stage of spelling that formal instruction in spelling can begin. These spellers have developed an awareness of the English orthographic system and how it works. This knowledge of the English orthography develops over many years with exposure to reading and writing. Students apply not only the sound system, but also the visual and morphological components of words. Here are some of the characteristics of conventional spellers:

- Learners have a working knowledge of the written system of English. They have knowledge of prefixes, suffixes, contractions, compound words, and homonyms.
- They are becoming more accurate in their use of including silent letters and doubling of consonants when needed.
- They can use visual strategies to identify misspelled words.

- They continue in their development of identifying irregular spellings.
- They are mastering the Latin forms of words.

Instruction at this level should focus on the morphological structure of prefixes and suffixes, generalizations for doubling consonants for words ending in ing, ed, er, est, common irregular spellings, possessives, using base words to form new words, dictionary skills, proofreading, editing, rubber banding words, and the spelling error patterns.

Advantages of Using Standard Spelling

Utilizing the standard spelling conventions results in such merits as:

1. Permitting fluent writing.

2. Reinforcing phonics instruction by using consistent, standard spellings for each sound, rather than guessed "invented" ones that may vary from student to student. (Ives, 1994: 2).

CALL: Definition, History and Necessity

CALL: Definition

CALL stands for Computer-Assisted Language Learning. Son (2004) puts it clearly that Computer-Assisted Language Learning is an approach to language teaching and learning in which computer technology is used as an aid to the presentation, reinforcement and assessment of material to be learned, usually including a substantial interactive element.

CALL is also defined as "a research field which explores the use of computational methods and techniques as well as new media for language learning and teaching." (Gamper and Knapp, 2002: 329). Furthermore, the term is defined by Levy (1997) as the search for and

study of applications of the computer in language teaching and learning. The researcher agrees on Cunningham's (2000) definition (See Chapter One: p.12 in this volume).

CALL: History

Warschauer and Healey (1998) assure that computers have been used for language teaching since the 1960s. The next thirty years can be divided into three phases:

★ *Behaviorist CALL*

Behaviorist CALL emerged in the 1950s and was implemented in the 1960s and 1970s. It can be considered a sub-component of the broader field of computer-assisted instruction. Informed by the behaviorist learning model, this mode of CALL has featured repetitive language drills, referred to as drill-and-practice. In this paradigm, the computer is viewed as a mechanical tutor that has never grown tired or judgmental and allowed students to work at an individual pace.

Lee (2000) adds that behaviorist CALL is first designed and implemented in the era of the mainframe and the best-known tutorial system, PLATO, ran on its own special hardware. It is mainly used for extensive drills, explicit grammar instruction, and translation tests.

★ *Communicative CALL*

The next stage, communicative CALL, came to light in the late 1970s and early 1980s, at the same time that behavioristic approaches to language teaching were being rejected at both the theoretical and pedagogical level, and when new personal computers were creating greater possibilities for individual work. The advocators to this type of CALL stress that computer-based activities should focus more on how to use forms than on the forms themselves, teach grammar implicitly

rather than explicitly, allow and encourage students to generate original utterances rather than just manipulate prefabricated language, and use the target language predominantly or even exclusively.

Communicative CALL corresponds to cognitive theories which stress that learning is a process of discovery, expression, and development. Popular CALL software developed in this period includes text reconstruction programs and simulations. Text reconstruction programs allow students working alone or in groups to rearrange words and texts to discover patterns of language and meaning. On the other hand, simulations stimulate discussion and discovery among students working in pairs or groups.

However, communicative CALL has the demerit of not focusing so much on what students do with the machine, but rather what they do with each other while working at the computer. Edler (2004) compares computer in communicative CALL to a pupil that is trained. She adds that communicative CALL practitioners also use the computer to stimulate learners.

"In the 1980s, the application of technology in language classrooms included the use of film, radio, television, language labs with audio and videotapes, computers, and interactive video….Various types of computer-assisted language learning (CALL) also became commonplace….Although there were some innovative uses of software, … the majority of CALL uses were limited in form to drill-and-practice exercises." (Graham et al., 2002: 250).

★ *Integrative CALL*

Recently, the focus of CALL has been shifted from the Communicative Call stage to the Integrative CALL stage in which

attention is attracted to the value of integrating language skills and technology in meaningful authentic contexts as a powerful potential for language learning. (Argondizzo, 2004).

Integrative CALL refers to a perspective which seeks both to integrate various skills: e.g. listening, speaking, reading, and writing; and also integrate technology more fully into the language learning process. In integrative approaches, students learn to use a variety of technological tools as an ongoing process of language learning and use, rather than visiting the computer lab on a once a week basis for isolated exercises (whether the exercises be behavioristic or communicative).

These three stages do not fall into neatly contained timelines. As each new stage has emerged, previous stages continue. Current uses of computers in the language classroom correspond to all three of the above mentioned paradigms.

CALL: Necessity

Lee (2000) provides an answer to the question of why using CALL is necessary. He identifies seven areas to which CALL can positively contribute:

- **Experiential Learning**

Since CALL makes it possible for students to tackle a huge amount of human experience, they can learn by doing things themselves. They become the creators not just the receivers of knowledge. As the way information is presented is not linear, users develop thinking skills and choose what to explore.

- **Motivation**

  Computers are most popular among students either because they are associated with fun and games or because they are considered to be fashionable. Student motivation is therefore increased, especially whenever a variety of activities are offered, which make them feel more independent.

- **Enhanced Student Achievement**

  Computer-Assisted Language Learning programs can help pupils strengthen their linguistic skills by positively affecting their learning attitude and by helping them build self-instruction strategies and promote their self-confidence.

- **Authentic Materials for Study**

  All students can use various resources of authentic materials either at colleges or at their home. Those materials can be accessed 24 hours a day at a relatively low cost.

- **Greater Interaction**

  Via CALL programs, learners can interact with their own classmates. Furthermore, some CALL activities give students positive and negative feedback by automatically correcting their exercises.

- **Individualization**

  Shy or inhibited students can be greatly benefited by individualized, student-centered collaborative learning. High fliers can also realize their full potential without preventing their peers from working at their own pace.

- **Independence from a Single Source of Information**

  Although students can still use their books, they are given the chance to escape from canned knowledge and discover other

information sources. As a result, their education fulfills the need for interdisciplinary learning in a multicultural world.

Dunkel (1990) asserts the possibilities of using computer technology as a tool that can include increasing language learners' self-esteem, vocational preparedness, language proficiency, and overall academic skills.

Obstacles of Using CALL

Calling them teachers' barriers to the use of Computer-assisted Language Learning, Lee (2000) classifies the obstacles that inhibit the practice of Computer-assisted Language Learning into four common categories:

Financial Barriers

Financial obstacles involve the cost of hardware, software, maintenance and some staff development. Concerning universities, policies and procedures for budgeting and accounting are well advanced for classroom instruction. New CALL technologies are add-on expenses and will not, in many cases, lower the cost of providing educational services. They probably will not replace the teachers, but will supplement their efforts, as has been the pattern with other technologies.

Availability of Computer Hardware and Software

Availability of high quality software is the most pressing challenge in applying the new technologies in education. In addition, having sufficient hardware in locations where learners have access to is also problematic and is, of course, partly a financial problem. Moreover, Computer hardware and software compatibility goes on to be a significant problem. Choosing hardware is difficult because of the

many choices of systems to be used in delivering education, the delivery of equipment, and the rapid changes in technology.

Technical and Theoretical Knowledge

Another barrier to the use of Computer-assisted Language Learning technology is the lack of technical and theoretical knowledge. Many instructors do not understand how to use the new technologies. Besides, there is a shortage of knowledge about developing software to promote learning.

Acceptance of Technologies

As change has become a unique trait of the contemporary time, people in general and educators in particular should accept and accommodate to the new alternatives that change imposes. Murphy and Terry (1998) indicate that the current of change moves so quickly that it destroys what was considered the norm in the past, and by doing so, creates new opportunities. But, there is a natural tendency for organizations to resist change. Wrong conceptions about the use of technology limit innovation and threaten teachers' job and security. In short, instructors tend not to use technologies that require substantially more preparation time, and it is tough to provide instructors and learners access to technologies that are easy to use.

Educational CALL Writing Programs

Perceiving the importance of CALL in teaching and learning second and foreign languages, researchers have become increasingly interested in its use as a tool to facilitate the acquisition of language skills. Graham et al. (2002) list a number of CALL programs related to writing skills:

1 – Commercial Software

Specialized companies in producing computer programs begin to design CALL programs for commercial profit. Numerous software programs are created in foreign languages, especially English. The literature seems to indicate that reading and writing are the most frequently addressed skill areas.

2 – Multimedia Authoring Software

Multimedia authoring software refers to the tools created by the researchers themselves using an authoring software program. Such programs, according to Motteram (1990), allow educators to create computer-based course materials with little or no computer programming experience.

3 – Word Processing Software

Levy (1990) argues that word processing software offers such features as spelling checkers, thesaurus, dictionaries, style checkers, and grammar checkers. Word processing software "is perhaps the most accepted and universal use of computers in education today" (Hyland, 1993: 21).

4 – Internet

Internet-based tools used in second and foreign language teaching and learning are such as E-mail, synchronous chat, bulletin boards, Hyper Text Markup Language (HTML), Dynamic HTML (DHTML), Extensible Markup Language (XML) and digital video.

Cunningham (2000) outlines the approaches he has used to enhance writing development with the aid of computers. These approaches include Text Repair type exercises; Drills and Practice, that may require the student to modify or correct text to address redundancy,

misspelling, grammatical error and errors of fact; "Cloze" type exercises; Exploratory Programs and the marking and moving functions of word processors and Simulation Games and Hypermedia, which can be used in exercises that require students to order jumbled text. Such exercises provide practice in the recognition and understanding of the use of discourse markers. Tutorials, on the other hand, refer to the programs that offer an explanation of certain rules. The following diagram sums up the types of instructional programs according to Cunningham (2000):

```
                    ┌─────────────┐
                    │  Types of   │
                    │    CALL     │
                    │Instructional│
                    │  Programs   │
                    └──────┬──────┘
   ┌──────┬──────┬─────────┼─────────┬──────────┬──────┐
┌──┴──┐┌──┴──┐┌──┴──┐  ┌───┴────┐┌────┴────┐┌───┴───┐
│Text ││Drills││Cloze│  │Exploratory││Simulation││Tutorials│
│Repair││ and ││     │  │ Programs ││ Games  ││       │
│      ││Practice││    │  │        ││  and   ││       │
│      ││     ││     │  │        ││Hypermedia││       │
└─────┘└─────┘└─────┘  └────────┘└─────────┘└───────┘
```
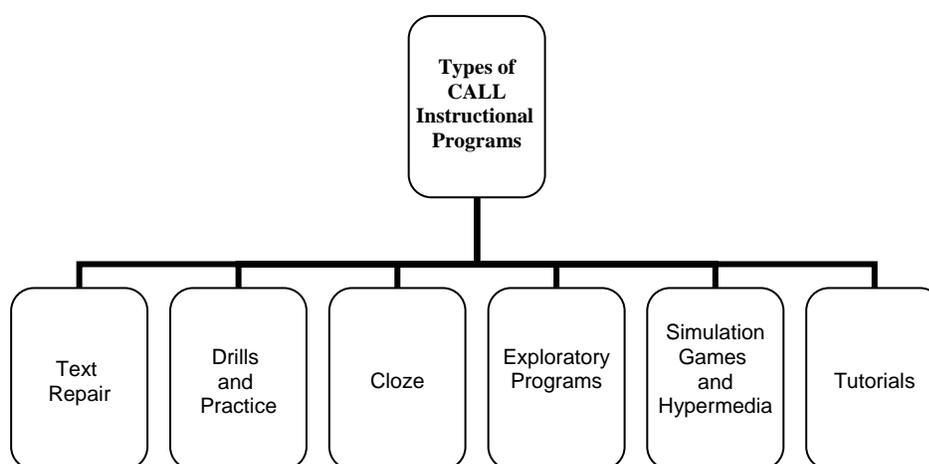
Figure (2): Types of CALL Instructional Programs

Warschauer and Healey (1998) state that writing is the area where computers have added a great deal of value. Some programs help students in the pre-writing stage to generate and outline ideas. Most word-processors now come with spelling checkers, giving weak spellers some help in finding their errors and recognizing the correct spelling from a list of options.

Criteria for Designing CALL Programs

In order to develop a CALL program, certain criteria should be followed. Chapelle (1998) suggests seven criteria for developing CALL programs:

- Making key linguistic characteristics salient.
- Offering modifications of linguistic input.
- Providing opportunities for comprehensible output.
- Providing opportunities for learners to notice their errors.
- Providing opportunities for learners to correct their linguistic output.
- Supporting modified interaction between the learner and the computer.
- Acting as a participant in second language learning tasks.

Computers and Mechanics of Writing

Computers have recently been utilized in the area of teaching and learning writing sub-skills including mechanics of writing. Researchers have discussed the possibilities and the advantages of CALL in relation to writing mechanics. Among such researchers are Bradley and Lomicka (2000) who investigate college-level students' reactions to technology. They find that simply using the computer to generate materials, authentic or not, is not enough. Rather, tasks and activities that involve the use of such materials have been found to promote successful learning.

Similarly, Blyth (1999) analyzes college students' written feedback. He concludes that successful implementation of new pedagogical approaches in software design and learning activities has to consider the learning context as well as the background of the students.

Students coming from a traditional textbook experience will have difficulty adapting to multimedia material that was culturally based.

McKay (1998) provides ideas for using computer technology in language arts classrooms, including learning the mechanics of writing; word choice; rewriting; small group formats; evaluation of writing; group-editing software; e-mail; writing for the Web; and hypertext. He suggests several ways to use a computer to teach writing skills such as:

1. Having students use a thesaurus to find better words in completed works. This will improve their vocabulary and style of writing. Looking up words in the thesaurus will give students a clearer definition of the words and the many ways they can be used.

2. Giving a pair or small group of students a piece of written work that needs revising. Disagreements among the groups will allow the teacher to talk about writing rules, standards, and exceptions to these rules.

3. Later, students may support their decisions in editing by stating the rule or standard they are following.

4. Finally, McKay suggests hypertext. Writing web pages will allow students more flexibility and creativity. Hypertext does not force one to write linearly. They can get their ideas across using short writings. Each paragraph must independently support the main idea and the reader must be able to get back to the main page easily.

In 1982, Wresch has discussed four developed computer programs which can help students with the composition process. Two of these

programs are concerned with the editing process: one, developed as a text editing system for journalism assignments, relies on a matching routine that takes a series of predetermined key words and searches for them in the student's news story; the other, also a text editing program, entails that the computer "reads" the entered essays, then prints out statistics on sentence length, use of prepositions, use of "to be" verbs and nouns ending in "tion." The statistics of the second program are followed by an appropriate warning about convoluted sentences or the excess of the "tion" nouns or "to be" verbs.

General Comments on Part One

- Mechanical problems have been a common obstacle that prevents EFL college learners from presenting good pieces of writing.
- CALL can be a good solution to such mechanical problems provided that the obstacles of its application are avoided as much as possible.

Part Two

In this part, the researcher sheds light on the previous studies related to either mechanics of writing or using CALL in writing teaching and learning. This investigation of what research has proved is crucial to make the study successful. Knowledge of related research enables researchers to define the frontiers of their field. Moreover, an understanding of theory in the field enables researchers to place their question in perspective. In addition, a thorough research avoids unintentional replication of previous studies. By thorough studying of related studies, researchers learn which procedures and instruments have proved useful and which seem less promising. Finally, the study

of related literature places researchers in a better position to interpret the significance of their own results (Ary et al., 1979).

Thus, Part Two is divided into two sections: section one which tackles the studies related to mechanics of writing; and section two that deals with the studies related to using CALL in writing teaching and learning.

According to Ary et al. (1979: 69) also, in organizing the related studies a researcher should "begin with the most recent studies in his field and then work backward through the earlier ones...Recent studies have already incorporated the thoughts and findings of previous research...Earlier misunderstandings have been corrected and unprofitable approaches have been avoided"

Therefore, related studies are chronologically arranged from the most recent to the earlier ones. Each study is followed by a brief comment in which the researcher indicates its importance for the current study. In conclusion, general comments on Part Two are included.

Section One: Studies Related to Mechanics of Writing

Apart from employing modern technology in teaching writing, a number of researchers try to design certain programs and implement some strategies to enhance writing sub-skills; especially, mechanics of writing. This section reviews such studies that are made by both Egyptian and foreign researchers.

Concentrating mainly on spelling, Nassar (2004) studies the effect of Multiple Intelligences Theory based activities on improving primary pupils' English spelling. Forty five language school pupils are chosen – twenty five boys and twenty girls – as the sample for the

study. The tools he uses are Teel's Multiple Intelligence Picture Inventory, spelling activities, a teacher's survey, a list of proposed activities and a spelling test. Both descriptive and inferential statistics techniques are adopted via SPSS. The findings of this study show that the proposed Multiple Intelligence activities positively affect the pupils' spelling. The activities used are very beneficial to the designing of the spelling section of the current program CD.

On the other hand, Calhoun and Haley (2003) describe a program for improving writing skills through choices of structured and unstructured writing process. Their main purpose is to increase learners' ability to produce quality writing as measured by the district fourth grade writing rubric. Consequently, the sample for the study contains sixteen of the fourth grade students. Researchers use a student interview – to document students' negative feelings on writing prior to the intervention; a questionnaire; an observation – to assess students' pre-writing abilities and a writing rubric, which is used to assess the writing samples. Percentages are used to find out how much students improve. Results show that structured writing style is slightly more effective for the students than the unstructured writing concerning improving their writing skills including editing. These results are adopted in the study at hand as learners follow the same template of explanation and editing exercises.

As for the Egyptian environment, Eissa (2003) investigates the effectiveness of portfolio on developing the reading and writing skills of EFL secondary stage students. Fifty first year secondary stage students are randomly chosen to represent the study sample. Writing

sub-skills are extensively tackled. The study sheds light on spelling, punctuation, grammar, cohesion and vocabulary use. The tools consist of a portfolio; a reading and writing test; a student's self-evaluative questionnaire; the marking scheme; the scoring rubrics; a checklist for the portfolio; self, peer and rater assessment and finally a student's post questionnaire. The statistical technique used is *t-test*. Results assure the effectiveness of using a portfolio-based program on developing reading and writing sub-skills. The current study makes use of self-evaluation as emphasized by Eissa as students correct their own mistakes in answering the exercises in each session of the program.

Being interested in the same stage, Ibrahim (2003) studies the effect of using a program based on some study skills on improving secondary school first grades writing. Thirty girls form the sample for this study. The tools used are two questionnaires, one for teachers and the other for students; a pilot study and three tests: an achievement test, a study skills test and a writing test. The dependent variables of Ibrahim's study are applying grammatical rules and mechanics of writing, writing an outline, using dictionary and reading comprehension. He concludes that writing improves when integrated with other skills. This fact is taken into consideration on designing the current program CD.

Similarly, El-Said (2002) designs a program so as to develop the preparatory stage students' mechanics of writing. Common errors and problems in punctuation and spelling that usually appear in Egyptian EFL students' writing are surveyed. The random sample for the study consists of sixty third preparatory grade students. Co-operative

learning is employed and reading is integrated with writing. An achievement test is administered and *t-test* is used to compare the performance of the control group with that of the experimental one. Final results refer to a great improvement in the experimental group use of mechanics of writing represented in spelling and punctuation. The study at hand employs some co-operative techniques borrowed from El-Said's in the discussion held at the beginning of each session (the warm-up).

Moreover, Gouty and Lid (2002) describe a program to improve student writing ability. A series of learning activities that address writing is developed; materials that develop writing skills in language arts are created and a writing unit is constructed. The targeted sample for the study is selected from first and third grade students in a middle class community. Instruments include surveys, students' writing performance and self-editing checklists. Results indicate an increase in the students' use of grammar and vocabulary. Students' improvement also increased in self-editing skills and attitudes toward writing. Portfolio assessment is highly recommended as an alternative to traditional assessments. This study does not cover mechanics of writing adequately, leaving them to be self-evaluated by learners in post-writing checklists. This is avoided in the current study.

Hopkins (2002) implements and develops a program to assist low-achieving tenth grade students' essay writing skills. The objective of the project is for students to successfully write and understand with 70% accuracy in the areas of pre-writing, drafting, revising and finalization essay writing as measured by teacher-made pre-posttests. Learners are given eighteen topics to write on. Hopkins uses such

methods for improving her sample's writing as instruction in the various stages of the writing process: prewriting, drafting, revision and publishing of five-part essays. The study main tools are the writing pre-posttest and the scoring rubric. All students either meet or exceed the intended objective. Finally, Hopkins recommends that the time spent on the peer editing, clustering methods and writing portfolios be increased and that rubrics be used to assist students for their self-monitoring of essay writing. These recommendations are stressed in the present study as there is a room for learners to discuss the sentences and passages they edit each session with their colleagues as well as with the lecturer.

On the same road, Kollig (2002) describes instructional strategies that can be used to improve the students' revising and editing skills during the writing process. This researcher focuses specifically on peer editing and student-teacher conferencing. The study tools contain a number of surveys and two rubrics prepared by the researcher to evaluate the students, writing. Post intervention data show an increase in students' achievement. Improvement is detected in all areas of content and mechanics. This study highlights the importance of peer editing. Thus, the study at hand allows learners to exchange experiences after answering the exercise questions of every session.

Like Kolling (2002), Stemper (2002) also describes instructional strategies to improve the revising and editing skills of sixth grade students during the writing process. She adopts the suggestion that instruction and evaluation can be improved through a writing workshop approach as a possible solution to the problem of poor revision skills. The instruments include a survey for teachers, a survey

for students and mechanics rubrics for the writing samples. Mechanics of writing fall into five categories: (1) capitalization and punctuation, (2) spelling, (3) support and imagery, (4) focus and clarity and (5) organization. Post data indicate significant growth in the revising and editing process: namely, the areas of content and mechanics. In addition the students' attitude survey indicates a significant growth in the students' understanding of the importance of revising and editing. The current study borrows some peer evaluation techniques from Stemper's to be activated during the program sessions.

Back to the Egyptian studies made on the topic, Aly (2001) tries to develop the composition writing skills through adapting the Whole Language Approach for the prep stage experimental school pupils. The sample contains thirty four randomly chosen pupils. Writing is divided into two basic skills: the content skill; which contains clarity, coherence and organization of ideas; and the form skill, which pertains to the correct use of word spelling and punctuation marks. Aly's tools are a pre-posttest, two questionnaires to identify the problem areas and a portfolio for evaluation. Standard deviation and *t-test* are used for statistical analysis of the obtained data. The concluding results affirm the fact that language should be taught in an integrative way that involves developing the four language skills together. This result is employed in designing the program CD of the current study. A voice is added so as to support listening skill and integrate it with writing.

At Saint Xavier University, Benischek et al. (2001) design a project aiming at helping students increase their fluency, confidence and enjoyment of writing. Their program depends on Brainstorming

Writer's Workshops, Author's Chair, Teacher's Modeled Writing and Mini-Lessons. The sample includes thirty-nine subjects enrolled in the First and Second Grade classrooms. The assessment tools contain pre and post-student surveys. Descriptive statistical techniques and percentages are used to analyze the data collected. Results show an improvement in the students' spelling (50% for the First Graders and 95.2% for the Second Graders). The study is restricted to spelling in handling mechanics of writing. It would have been more useful to the current study, if it had treated other mechanics components.

At the same university, Christopher et al. (2000) suggest a program for improving students' writing skills in the areas of mechanics and organization through the implementation of a Writer's Workshop. The targeted population consists of fourth and fifth grade students. The Writer's Workshop approach encompasses such a variety of mini-lessons as punctuation, capitalization, sentence structure, word choice, supporting details, transitions and editing. The study tools are represented in teacher evaluation and students-self evaluation checklists, teacher developed rubrics and teacher-students conferences of writing samples. Results refer to the fact that the components of Writer's Workshop are helpful in improving students' mechanics and organization in writing. Adopting certain steps of the Writer's Workshop mini-lessons, the study at hand enriches the lecturer-student interaction within the sessions.

Being concerned with identifying the most common grammatical and punctuation errors made by undergraduates as perceived by business communication professors, McCannon and Crews (1999) pick a sample of one hundred and eighty seven college students and

analyze their writing samples. The top grammatical errors made by undergraduates are as follows: subject-verb agreement, sentence fragments, subject-pronoun agreement, nonparallel series, and wrong word choice. Whereas the top punctuation errors include run-on sentences, comma splice, missing commas and misuse of the possessive apostrophe. This study, however, does not suggest solutions to such errors.

In a study similar to Stemper's, Lambert (1999) implements a program to help improve 12th grade English students' writing skills through conferencing. The targeted group consists of thirteen students who experience difficulties in writing effective written pieces. Their writing includes fragments, run-on sentences and improper use of punctuation. Strategies mainly include collaborative learning, revision conferences, peer editing conferences and teacher-student conferences. These strategies prove to be effective in improving students' writing skills. This study is useful to the present one in the sense that the model of teacher-student conference is activated during the current program sessions.

Concentrating on spelling, Miele (1998) examines teaching and learning issues surrounding orthography in a community college setting. Spelling materials are designed in English and given to ESL college learners with the goal of integrating the experience of English speaking and writing. The sample used in the study is very small (n = 7) selected from classes of English as a Second Language at a community college in New Jersey. Participants' responses are formatively evaluated by analyzing session video tapes. The study reveals that students who have difficulty with English spelling

respond positively to rule-based instruction aiming at increasing their understanding of the orthographic system. Students with weak spelling skills also have limited phonological and lexical competence. Findings also highlight the need to address spelling in ESL classes. The lesson plans of Miele's study are a source of great help in preparing the current study lecturer's guide and spelling sessions scientific content.

In Egypt, Mahmoud (1997) tries to find out to what extent the interactive approaches are effective in regard to developing English writing skills of first secondary grade students. The sample for the study includes four hundred and eighty one students who are randomly picked out of six secondary schools. Her tools consist of an essay test, an objective test, a grading scale, a pictorial test and a socio-economic form. The study identifies such writing skills as mechanics (punctuation and spelling), grammar use, style, paragraph order and word choice. Statistically, she activates *t-test* in order to analyze her obtained results. Mahmoud's findings come up with the fact that interaction improves the students' writings. Some interactive techniques among learners are utilized by the current study during the warm-up step in each session.

Describing a program for motivating reluctant writers, Pierce et al. (1997) make a study in which they choose one fourth-grade and four fifth-grade classrooms in three elementary schools as the study sample. The problems of reluctant writers are documented with timed writing samples, student and parent surveys, standardized test scores and teachers' observations. Analysis of probable causes indicates that reluctant writers experience difficulties due to such factors as spelling,

handwriting problems, poor mechanical skills, lack of motivation, previous writing failure and fear of exposing their feelings. A review of suggested solution strategies results in the development of a writing program that encompasses a variety of authentic writing experiences. Students' writing is documented in individual portfolios. Co-operative writing activities are used to increase production, skills, motivation and confidence in writing. Findings show an increase in positive attitudes towards writing, an increase in learners' motivation and a development in writing sub-skills due to the designed program. Some co-operative techniques used in this study are adopted during the stages of displaying the rules and answering the exercises in the program at hand.

Adams et al. (1996) implement a program so as to improve writing skills and related attitudes of elementary school students. Their sample consists of thirty-eight second and fifth grade students. The researchers begin by administering writing interest surveys to the sample. The next step is to have the students write on a prompt. The writing prompts are graded using a writing rubric developed by the researchers. Results determine the skill areas that need to be addressed during the intervention period. In regard to the second grade students, the sub-skills of mechanics, organization and focus need to be addressed. The program implementation begins adopting the portfolio technique for developing the previously mentioned sub-skills. Mechanics of writing in this study include capitalization, punctuation, spelling and sentence structure. A pre-posttest is administered to determine whether the used program affects the students' writing skills or not. Final findings refer to the fact that second grade students make

significant gains in the areas of writing mechanics, organization and focus. Fifth graders make significant gains in the areas of using conventions correctly and using details to support main ideas. This study, however, neglects providing instructional rules to students. This is realized on designing the current program.

Devoting his study mainly to spelling, Chrisman (1996) discusses spelling instruction for learners of English as a Second Language (ESL). The aim of the study is to explore spelling instruction in ESL by examining the TESL literature, general English language arts literature and through a brief look on writing systems in general and English orthography in particular. The exploration results refer to the fact that there is no "right way" to teach spelling, thus, an eclectic whole language approach is recommended. The recommendations stated by Chrisman are activated – to some extent – in the current study.

Furthermore, Nyamasyo (1994) adopts a corpus-based approach to describe types of spelling errors. The differences in the sound system of English and the first language of the students in the study are one of the principal causes of committing spelling errors. The study advocates the teaching of spelling and the inclusion of a contrastive analysis approach in English courses.

Dealing with writing as a whole – without concentrating on a specific sub-skill – Aly (1984) makes an experiment to find out whether communicative teaching develops college learners' writing skill or not. He assigns sixty English Department freshmen at the Faculty of Education in Alexandria to be the sample for his study. Both objective and essay tests are administered to the experimental as

well as the control groups. Data is statistically analyzed by *t-test* technique. The study results recommend using the communicative approach in teaching writing. Prospective teachers – according to Aly – should be well-trained on communicative techniques. The current study employs some of the communicative techniques that are stated by Aly (1984) in the discussion that precedes each session (the warm-up).

Section Two: Studies Related to Applying CALL to Writing Teaching and Learning

Influenced by the widely-spread usage of computers in almost all the fields of modern life, some Egyptian and foreign researchers seek for utilizing the new set in order to develop writing sub-skills. Section Two tackles some of the studies made in this area.

In Egypt, Al-Hamshary (2006) is concerned with assessing the effectiveness of using a multimedia computer program to develop five English writing skills of secondary stage students: formulating main idea, supporting the main idea with details, vocabulary use, grammar use and mechanics. Her sample consists of two hundred and twelve students divided into an experimental group and a control one. She uses *t-test* to test her six hypotheses. Results show that there are significant differences between the mean scores of post test in favor of the experimental group. Consequently, she concludes that computer and multimedia are effective in improving learners' writing skills. However, Al-Hamshary (2006) does not offer an exhaustive explanation of the mechanics of writing rules; the emphasis is distributed among several skills.

On the contrary, Carlos (2005) tries to determine if there is a statistically significant difference in the English writing achievement of Puerto Rican University students who receive CALL and those who receive usual instruction only. The study sample contains one hundred and thirty four students. The experimental group consists of sixty two students whereas the control one includes seventy two students. The quasi-experimental design for non-equivalent groups is applied and a pre-posttest is administered. Statistically, the *t-test* indicates that there is no significant difference in the English writing achievement between the university students who receive CALL and those who receive regular instruction. Therefore, it is concluded that CALL does not result in greater writing achievement in a Basic English course. The result of this study, which does not agree with the majority of studies, necessitates further research. Hence, the study at hand comes to light.

Moreover, Danielle (2005) aims at using classroom based research in order to evaluate the effectiveness of classroom teaching practices in improving learners' writing in English as a second language (ESL) composition classes which incorporate technology to varying degrees. The researcher identifies the needs of ESL learners in the light of such theories as Second Language Acquisition (SLA) and Computer-Assisted Language Learning (CALL). The study tools involve observation, audio-recording, note-taking, virtual sites and e-mail correspondence between teachers and learners. Data are analyzed through online observation and discourse analysis. Results of data analysis reveal that much of the success and effectiveness of an ESL composition course comes down to teacher design and delivery of the

course. Furthermore, factors such as teacher training, education and technology play an important part in designing and delivering an effective ESL composition course. This study enriches the current program CD designing. Moreover, it sheds light on the needs of ESL learners in a writing course.

Whereas Evelyn (2004) aims at exploring the use of Computer-Assisted Language Learning in a content-based ESL course at the College of General Studies in the Puerto Rican University. The small sample for this study includes fifteen subjects enrolled in the Basic English course, who score 450 or less in the College Board Entrance Examination (CBEE). In order to collect information, Ernest Stringer's Spiral Model is used. Other tools of the study also contain observation, informal interview and reflexive journals. The study suggests modifying and designing new CALL activities that appropriately lead learners to become confident and successful college students. This study is a source of great help for designing the current CD CALL Program.

Using a number of various technological writing activities, France (2003) designs a program so as to increase intermediate students' interest in writing. The sample for the study includes twenty one fifth grade students. Analysis of the pre-experiment data indicates that students' lack interest in writing as well as writing abilities. The program is based on three main interventions: creation of a computerized classroom newsletter, development of students' stories using Hyper Studio and the use of technology in various writing activities. France's tools consist of a pre-intervention survey, teacher's observation notes, a post-interview and a pre-post intervention

questionnaire. Post intervention data show an increase in student interest in writing using technology as well as an increase in confidence as a writer, desire to share written work and desire to improve quality of writing. Students in the target group also improve their technology skills and their willingness to have edited by a peer. Peer editing is activated during the current study sessions.

Concentrating on commercial programs, McDonnell (2003) describes how Writing Expedition software allows several sixth graders to read and comment on their classmates' writing in an online environment. Five students are selected as a sample for this study. Students drop editing tabs about punctuation, capitalization, spelling and syntax errors. The study tools include interviews with the students and the Writing Expedition software. Results indicate that students leave more comments and read more papers than would be possible in the classroom with the use of pen and paper because they have unlimited space to insert their comments and do not interfere with the original draft. These results are beneficial to the design of the current program, especially the exercise section.

Being interested in Integrated Instruction Through Technology (IITT), Nathan (2002) identifies four purposes of his study: (1) to examine the attitudes and motivation of both teachers and students toward (IITT) for college English reading and writing, (2) to identify the relationship between teachers' and students' technological knowledge and their willingness to apply (IITT) in class, (3) to investigate the ways teachers and students are using technology currently in teaching and learning English reading and writing and (4) to explore effective ways of using technology to promote English

literacy. The study sample is picked from three different systems: Public University, Private University and Military Academy. Descriptive Statistics, correlation and *t-tests* are applied. Results show that students and teachers have high motivation and positive attitudes toward (IITT), but they lack experience applying it. No significant relationship is found between either students' or teachers' technological knowledge and their willingness to enroll in or teach a class using (IITT). English grades are significantly correlated with the students' computer experience. In other words, the more students use computers for learning English reading and writing, the higher their English grades will be. This study affects the designing criteria of the current CALL Program.

Besides, Bassett et al. (2001) describe a program for improving writing skills. The targeted population consists of first and third graders in two middle class communities in the southern suburbs of Chicago. The need for improvement in writing skills is documented through observation, checklists, writing samples and surveys. The suggested strategies for teaching writing sub-skills are: parents involvement, through newspapers and articles; the use of writing centers; the use of e-mail; letter writing; free choice of topics; the use of literature to teach writing; Author's Chair; interactive journals or notebooks; allowing inventive spelling; cross curricular writing and encouraging at-home writing. Post-intervention data indicate an increase in the targeted students' writing abilities, a positive attitude toward the writing process, an increased confidence in the editing and revising of student work and increased parental involvement in the

area of writing. Some of the suggested strategies of this study are activated during the different phases of the current study.

Furthermore, DerMovsesian (2001) studies what happens when The Ultimate Writing and Creativity Center computer program is utilized by four second grade students in an after-school writing workshop. Her study results in seven findings: (1) computer programs help students generate ideas for their writing, (2) most students prefer typing to writing by hand, (3) most students write more on using the program than they do with paper and pencil, (4) computer programs do not help students' spelling in their writing, (5) computer programs help students review their work and correct their mistakes (editing skills), (6) students may have some difficulties in using computer programs and finally (7) students are motivated to write on using technology. To put it in a nutshell, this study clarifies that computer programs can be useful in developing some – put not all – writing sub-skills. This partial contradiction with other studies inspires the researcher to make the current study.

On the other hand, DeFoe (2000) uses directed writing strategies to teach writing skills to middle grades language arts students who frequently failed to get average or above average scores in essay writing assignments. Three strategies are used to improve students' writing skills: teaching higher order thinking and metacognitive strategies related to the process of writing, co-operative learning in small groups and teaching word processing and writing skills by using computers. The sample for the study consists of forty five sixth grade language arts students. The study tools are an informal survey to language art teachers, an essay pre-posttest and a grammar pre-

posttest. DeFoe depends on the mean scores for analyzing data. Her results reveal that students do improve their writing skills, but not significantly. Some of this study recommendations are: e.g. providing students with a course that includes writing and spelling skills.

Like DerMovsesian (2001), Yackanicz (2000) investigates the use of writing-prompt software: namely, The Ultimate Writing and Creativity Center, by two third grade students enrolled in a school in a suburb of Philadelphia, Pennsylvania; and compares their work on computer with their pencil and paper writing. The principal question of the study is: What happens when a reluctant writer uses writing-prompt software? The researcher uses questionnaires, interviews, observations, a collection of pencil and paper stories and computer work so as to collect her data. Findings refer to the positive effect of using computers on developing students' writing skills. Students learn the importance of details in writing and apply this knowledge whether they write with or without a software program. Yackanicz's study is useful for the current one, especially in the program design stage.

On the same track, Hamza (1998) reports the methodology and findings of a case study that examines the pedagogy, technology, beliefs and contextual factors of three ESL teachers who taught their writing courses with computers. This study also examines ten CALL teachers' pedagogy, technology and beliefs about Computer-Assisted Writing Instruction (CAWI). The study tools involve interviews with three ESL teachers and their students, interviews with ten CALL teachers, live classroom observations, video recording of the writing classes, the researcher's journal and relevant documents. The focus is on writing pedagogy, writing software and hardware, teachers' beliefs

and contextual factors. Results can be summed up in the following five points: (1) the writing pedagogy the teachers use in the context of CAWI is similar to the pedagogy used in traditional writing contexts that use pen and paper; (2) teachers use commonly available software such as word processors and e-mail; (3) type and model of computer hardware is not a prevailing issue for the teachers; (4) the effect of contextual factors is observed across the three cases, with the influence of lab layout being the most apparent and (5) teachers exhibit a range of beliefs about teachers, students, software, hardware and the context of CAWI. These beliefs influence the teaching process. This study gives the researcher an insight about how the CALL environment should be organized.

Focusing on university community, Lang (1997) seeks for determining to what extent English departments in four-year state universities nationally use computers in instructing first-year composition. The study is designed as a cross-sectional status model to measure the status of how technology is being used in the teaching of writing, the frequency of use, how writing teachers adapt instructional methods for teaching writing with the use of computers and the relationship between institution size and the extent to which technology is being used. The sample is composed of three hundred English department chairs, selected by random sampling from the six hundred and six four-year state universities in the United States. The survey instrument contains nineteen questions designed to determine the frequency of computer instructional delivery in first-year composition classes in four-year state universities. In addition to reporting the means of each survey question, an analysis of variance

(ANOVA) is conducted to determine any significant difference between institution size and the extent to which technology is used. Significance is determined and is followed by a subsequent Tukey post-hoc test. Results of the study indicate that technological innovations begin to be utilized to teach writing, but the traditional methods still prevail. Collaborative writing, internet, and world-wide web (WWW) are seldom employed. The only significant difference regarding institution size occurred in faculty training in computers and software at institutions with enrollment of 8,001 to 12,000. Institutions of this size are more likely to offer faculty training to use computers. This study gives an insight about the importance of employing modern technology in the college composition courses.

Tackling writing sub-skills in detail, Gomez (1996) studies the probability of improving students' writing skills through language and background development and the use of technology. Seven of fifth grade bilingual students form the study sample. The study addresses fourteen sub-skills of writing including punctuation, capitalization and spelling (known as conventions of writing). Gomez's program plan suggests that students should use word processing to write the final draft, to make final corrections and to publish their work. To increase cognitive vocabulary, the students use the curricular themes, novel units and daily vocabulary. A pre-posttest is administered and final results indicate that all students do well in spelling and capitalization. However not all students show progress in punctuation. The partial disagreement of the results of Gomez's study with its predecessors prompts the researcher to make the present study.

In Mansoura, Hassan (1996) experiments the effect of computer word processing on developing the faculty of education students' writing. The random sample includes thirty two students. Statistical analysis is done via *t-test*. He concludes that computer word processing enhances the development of writing skills. This study, however, does not offer standard rules of writing sub-skills before practice writing by computer word processing.

In an entirely theoretical study, Douglas (1995) provides a comprehensive framework of the slow integration of computer technologies in the composition classroom; explores the theoretical background which drives the movement toward a more comprehensive computer- aided pedagogy at all levels of writing instruction and sets an introduction to computer- facilitated pedagogy, focusing on an example of how one possible method of bringing technology (hypertext) to the writing classroom works in practice. She defines a hypertext as "…a text composed of blocks of words (or images) linked electronically by multiple paths, chains, or trails in an open- ended, perpetually unfinished textuality described by the terms link, node, network, web, and path". Douglas advocates the use of Hypertexts in composition computer programs. In designing the current CD slides, the researcher makes use of Hypertext technology so as to smoothly direct learners from rules to exercises then model answers and vise versa.

In a similar attempt, Fante (1995) aims at examining whether computer-assisted instruction integrated with lecture/discussion will improve students' performance in developmental English when compared with a traditional lecture/discussion method. One hundred

and eighty students enrolled in one of six sections of developmental English at the University of Florida represent the sample for the study. Two full-time instructors one conducts a traditional lecture/discussion and the other uses the computer-assisted program activating the INVEST and PLATO software. The research questions addressed are: (1) Is there a difference in achievement among students who are taught developmental English using either software as compared with students who receive instruction through traditional techniques? (2) Is there a difference among students in Associate of Arts or Associate of Science degree programs who are taught developmental English using either software compared to students receive instruction through traditional techniques? The Multiple Assessment Programs and Services (MAPS) language arts pre-and posttests are used to measure writing achievement for all groups. A One-Way Analysis of Covariance is used to analyze the relative effectiveness of the different instructional methods and to determine if differences exist between writing scores of Associate of Arts degree-seeking students and Associate of Science degree-seeking students by the different instructional methods. The use of computer-assisted instruction shown in this study has proved to be an effective method for teaching writing skills. The difference between the two types software programs is not statistically significant. The PLATO and INVEST software programs used in Fonte's study are a source of great help for designing the different slides of the current program.

Yon (1995) investigates whether using whole language, co-operative learning, CAI and an authentic audience to create a magazine can help second and third grade students to learn

punctuation skills. The sample for the study consists of two different groups of eight elementary students. The study is held in a summer computer camp in which each student is asked to write an article for the magazine. Yon sets three objectives for her study: (1) all members of the target groups will improve their punctuation of sentences, specifically periods, capital letters, commas and question marks; (2) all members of the target groups will write an article for a magazine that is completely free of capitalization and punctuation errors and (3) members of the target groups will produce a camp magazine containing articles and graphics. Results indicate that integrating computers into classroom magazine writing provides the correct environment for learning punctuation skills. This study asserts that all students should have at least some exposure to computers prior to attending to CALL programs. That is why the present study takes into consideration the fact that some students are not used to dealing with computers and accordingly a students' guide is handed to each learner before using the CD. In addition, the program design is characterized by simplicity in terms of usage.

General Comments on Part Two

The most important remarks extracted from the review of related studies in sections one and two can be summarized as follows:

- Most of the studies in Section One advocate using such techniques as collaborative revising and peer editing in teaching and learning writing sub-skills. As a result, the researcher activates these techniques in the current study.

- The majority of studies in Section Two confirm that using computer programs enhance the different writing sub-skills.

Nevertheless, a few studies contradict with this confirmation. That is why the current study is an attempt to fill in a gap in this conflict.

- Most studies are interested in investigating the effects of different teaching strategies or computer programs on elementary and secondary school students' writing skills. A few researchers address college learners in their studies. In short, there is not enough research on college learners' writing skills. Therefore, the current study is quite important.

- The sample used in a vast number of studies – with few exceptions – is too small to allow generalizing the results obtained by these pieces of research. Consequently, the researcher identifies a sample of eighty students so as to obtain quite reliable and valid results.

- In terms of statistics, almost all studies reviewed use *t-test* and / or ANOVA. The current study, as well, use both techniques to analyze its data.

- Section Two studies describe various computer programs to develop writing skills. These programs help the researcher design her current CALL program.

CHAPTER THREE

METHODOLOGY

The study at hand aimed at investigating the effect of using a CALL program on EFL college learners' mechanics of writing. To achieve this aim, a number of operational procedures were taken:

1 – Identifying population and variables.

2 – Sample selection.

3 – The experimental design of the study.

4 – Controlling interrelated variables.

5 – Designing the study tools.

6 – Designing the study material.

7 – Carrying out the experiment.

8 – Observation.

Identifying Population and Variables

Population

The population of this study was the Egyptian EFL college learners. This population was too vast to be investigated. Thus, this population was reduced to what is called *the accessed population* that would likely be the fourth-year students (2006 / 2007) of the English Department at the Faculty of Education in Kafr El-Sheikh.

Variables

Following the classification illustrated by El-Kosair (2006), the researcher divided the current study variables as follows:

Independent Variable: The independent variable of this study was represented in the CALL program designed by the researcher.

Dependent Variables: The dependent variables in the current study were the three components of mechanics of writing: punctuation, capitalization and spelling.

Interrelated Variables: Interrelated variables were those variables that had to be controlled so as not to interfere with the effect of the independent variable on the dependent one(s). These variables were represented in: the academic content, the experiment duration and administering the test. Controlling these variables is comprehensively discussed later on in this chapter in talking about controlling interrelated variables.

Sample Selection

The Pilot Study Sample

On Saturday, November 12, 2005 the pilot study was implemented on a sample of one hundred and seventy three (n = 173: 150 females and 23 males) students randomly chosen from the population – third year students at that time – by distributing the pilot test to all students attending an essay lecture.

The Experiment Sample

As previously clarified, the accessed population of the study at hand was restricted to the fourth-year students (2006 / 2007) of the English Department at the Faculty of Education in Kafr El-Sheikh. A sample was picked out of this accessed population in order to carry out the experiment. The sample for this study was an unbiased simple random sample. The simple random sample is defined by Moore (1997: 12) as "…a sample of n units chosen in such a way that every collection of n units from the sampling frame has the same chance to be chosen."

The following steps to get a simple random sample were adopted:

1 – A numerical label was assigned to every student enrolled in the fourth-grade (2006 / 2007) of the English Department at the Faculty of Education in Kafr El-Sheikh.

2 – Random digits were used to select eighty students (n = 80). (Moore, 1997: 13)

Thus, the study sample consisted of eighty fourth-year subjects (2006 / 2007) of the English Department at the Faculty of Education in Kafr El-Sheikh. This number included twelve males and sixty eight females. This sample was equally divided into two groups: the control group and the experimental one. Here is a figure that sums up how the steps of sampling were done:

First Step

Identifying the Population
Egyptian EFL college learners

Second Step

Identifying the Accessed Population
The fourth-year students (2006 / 2007) of the English Department at the Faculty of Education in Kafr El-Sheikh

Third Step

Picking the Simple Random Sample
Eighty fourth-year students (2006 / 2007) of the English Department at the Faculty of Education in Kafr El-Sheikh

Figure (3): The Study Sampling Steps

The Experimental Design of the Study

According to Ary et al. (1979: 237) "Experimental design refers to the conceptual framework within which the experiment is conducted. An experimental design serves two functions: (1) It establishes the conditions for the comparisons required by the hypotheses of the experiment and (2) it enables the experimenter through statistical analysis of the data to make a meaningful interpretation of the results of the study". They provide six possible options for experimental designs. The current study utilized the Randomized Groups, Pretest-Posttest Design. In this design, subjects were assigned to the experimental and control groups by random methods and were given a pretest on the dependent variable. The treatment was introduced only to the experimental group for allotted time. The control group received the traditional teaching technique. After treatment, both groups were measured on the dependent variable. The average difference between the pretest and posttest was found for each group and then was statistically analyzed.

The following figure clarifies the whole story:
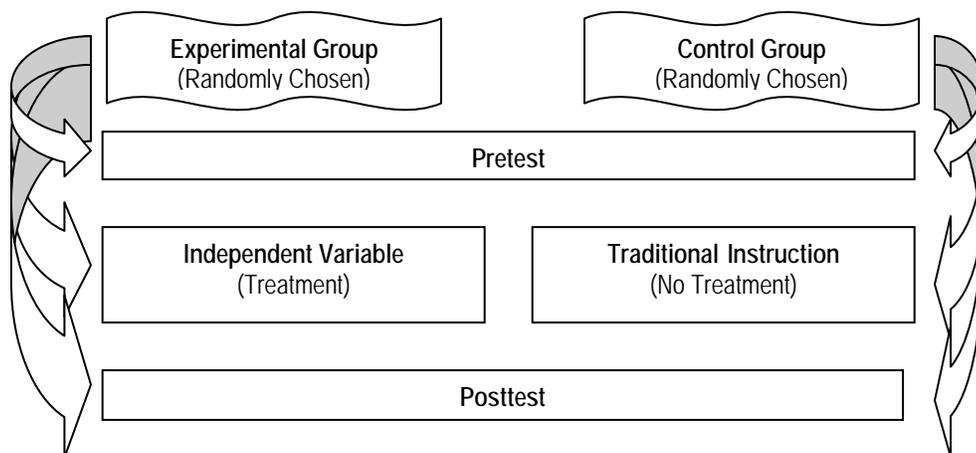
Figure (4): The Study Experimental Design

Controlling Interrelated Variables

As previously illustrated, the researcher should control the interrelated variables to guarantee that nothing affects the treatment carried out by the independent variable. So, the researcher identified such variables that might interfere with the independent variable and tried controlling them. The interrelated variables of the current study were: the scientific content, the experiment duration and the test administration.

The Academic Content

Before the beginning of the first semester 2006 / 2007, the researcher had prepared an exhaustive remedial content on mechanics of writing to be included in the essay writing course. Both the control and the experimental groups studied the same content simultaneously. The difference lay in that the control group received traditional instruction in the lecture with the help of the course book, whereas the experimental group studied the content at a computer lab using the specified CALL CD program.

The Experiment Duration

The implementation of the suggested CALL program took ten sessions (including two sessions for administering the pretest and the posttest). The experiment was carried out during the first semester of the academic year 2006 / 2007.

It lasted for ten weeks (from Saturday, September 30, 2006 to Saturday, December 2, 2006). Each session took an hour. This applied to both the control and experimental groups. The groups studied the specified content simultaneously: the control group at the amphitheatre and the experimental one at the computer lab.

The purpose of this synchronism was not to allow any student of either group to attend with the other, especially those of the experimental group.

The Test Administration

The test administration both before and after the experiment was held at the same time for both groups so as to ensure their equal opportunities to answer its questions, and not to allow such factors as cheating or forgetting to affect the students' scores. The pretest was administered at the first session on Saturday, September 30, 2006. The posttest was held at the last session on Saturday, December 2, 2006.

Designing the Study Tools

The researcher used three tools for collecting the data of her study:

[1] The Pilot Study.

[2] The Achievement Test.

 [3] The Questionnaire.

These tools were designed and prepared by the researcher. The following pages tackle each tool in detail.

The Pilot Study

As previously stated in chapter one, one of the sources of determining the existence of the study problem was the pilot study which the researcher had made during the second semester of the academic year 2005 / 2006. This study was represented in a test prepared by the researcher (See appendix A in this volume). On Saturday, November 12, 2005, the pilot test was administered.

The Achievement Test

Test Construction

An objective achievement test was constructed by the researcher so as to be used as a basis for determining if the suggested CALL program had enhanced the experimental group students' performance in mechanics of writing, since achievement tests, according to Childs (1989), are well suited to provide educators with objective feedback as to how much students learn and understand.

Consulting such related references to test construction as Childs (1989), Cunningham (1986) and Anastasi (1988); the researcher followed the common steps of constructing good achievement tests:

- *Content Analysis*

The writing mechanics content taught to the fourth year students was analyzed. Mechanics of writing included three components that were measured using the achievement test:

(1) The correct use of punctuation marks [Ten Marks = 50 Standard Rules].

(2) The correct use of capital letters [10 Rules].

(3) The correct use of spelling conventions [24 Rules].

- *Course Objectives*

The instructional objectives of the current course were set (See appendix B in this volume).

- *Table of Specification*

A table was prepared to help the researcher specify the rule(s) each question in the test measured (See appendix C in this volume).

- *Test Organization*

The test instructions were written in order to clarify the test objective and explain how to answer the different sections. Then, the test body was constructed (See appendix D in this volume):

* Section (A) contained sentences to be punctuated and letters to be capitalized. It consisted of separate sentences.

* Section (B) included two short letters to be punctuated and capitalized. This section differed from section (A) in that it measured the students' ability to deal with extended flow of written discourse rather than separate sentences.

* Section (C) tackled the various rules of the spelling sub-skill. It contained multiple choice items.

* Section (D) concentrated on the part of words often confused embedded in spelling rules. In this section, learners determined whether the underlined word in each item was spelt correctly or not; they had to correct the wrong spelling.

A model answer of the test questions was prepared to serve as an objective key for correcting the test after administration. (See appendix E in this volume).

The next step was putting the test to the proof. Thus, the following procedures were taken in order to analyze test items and estimate test reliability and validity.

 [1] Test Administration

The test, after making the modifications recommended by the jury (this is discussed later in talking about content validity), fell into four sections. The total number of items was 80. In order to try the test out, it was administered; on Saturday, September 23, 2006; to a sample of

30 students. Item difficulty, item discrimination and test reliability were calculated from the data of this try-out (See appendix G in this volume).

[2] Item Analysis

- *Item Difficulty*

According to Cunningham (1986), a test difficulty should be halfway between the number of items a student could get correct by guessing and 100 percent. In other words, the lower the difficulty index the more difficult the item is. Thus, both the extremely easy and the extremely difficult items had to be excluded. To get an item difficulty, the number of students getting an item correct was divided by the total number of students attempting the item.

For a multiple choice test with four options, the ideal difficulty level is 62.5; for a true-false test, the best difficulty level is 75.

The following formula was stated by Pickerill (2000) and was adopted to calculate each item difficulty:

$$P = \frac{\text{Successes in the HSG} + \text{Successes in the LSG}}{N}$$

Where:

P = difficult index value.

HSG = high scoring group.

LSG = low scoring group.

N = total number of students tried the test.

The items which have shown difficulty index that ranged between 25% and 75% were satisfactory, since this percentage indicated an average level of difficulty (See appendix H in this volume).

Item Discrimination

The degree to which an item differentiates correctly among test takers in the behavior that the test is designed to measure is known as item discrimination (Anastasi, 1988). Item discrimination was calculated by the formula:

$$\text{Discrimination Index (D)} = \frac{RU - RL}{N \text{ (each)}}$$

Where:

RU = the number of students that answered the item correctly in the upper group.

RL = the number of students that answered the item correctly in the lower group.

N = the number of students in each group.

"The higher the D, the better the item because this is an indication that the item discriminates in favor of the upper group, which should get more items correct." (Cunningham, 1986: 156).

Only items showed discrimination indices between .25 and .75 served satisfactorily. Accordingly, eighteen (18) items were excluded because they either showed a high difficulty index or a low discrimination. As a result, the final version of the test fell into four sections with 62 items (See appendix H in this volume).

[3] Test Reliability

Test reliability is defined as the extent to which a test is repeatable and yields consistent scores (Neill, 2005). Guttman's general formula for split-half reliability was adopted:

$$r_{aa} = 2 \left(1 - \frac{\sigma^2 \text{ odd} + \sigma^2 \text{ even}}{\sigma^2 \text{ total}} \right)$$

<div align="right">(El-Sayed, 1979: 530)</div>

Where:

r_{aa} = test reliability.

σ^2 odd = the variance of the odd marks.

σ^2 even = the variance of the even marks.

σ^2 total = the variance of the test total marks.

Applying this formula using the learners' scores on the pilot administration of the test, reliability was **.**83. Since Neill (2005) argues that reliability estimates of .80 or higher are typically regarded as moderate to high (approx. 16% of the variability in test scores is attributable to error), the test proved to be reliable.

[4] Test Validity

Content Validity

"Content validity refers to the extent to which the instrument represents the content of interest." (Ary et al., 1979: 197). A jury of seven professors judged the content validity of the current achievement test (See appendix F in this volume). The jury members suggested such modifications as:

1 – Reducing the number of items: The test was remarked by being relatively lengthy. Consequently, items in some sections were reduced according to the jury members' suggestions.

2 – Reformulating some items: It was suggested to modify some items in order to match the learners' environment or cultural background.

3 – Distribute the test instructions to the different sections: In the first version of the test, the whole instructions were stated once at the very beginning of the test sheet. The jury suggested that each section had to be introduced by its instructions.

Test Scoring

The various sections of the test were scored as shown in the following table:

Table (6): Scores Devoted to Each Section of the Achievement Test

Test Sections	Scores
Section (A)	94
Section (B)	18
Section (C)	18
Section (D)	16
Test Total Score	146

For sections (A) and (B), the score of each item depended on the number of punctuation marks that had to be inserted; each item in sections (C) and (D), however, was granted one score, since the questions in these sections were either multiple choice or true / false.

Test Optimum Limit

The test try-out was administered on Saturday, September 23, 2006 at 10:45 a.m. The first student finished the test at 11:30 a.m.; the last student finished the test at 11:55 a.m. Consequently, the test optimized time was calculated by getting the mean of the two students' spent time as follows:

$$\text{Test Optimum Limit} = \frac{45 + 70}{2} = 57.5$$

The Questionnaire

A questionnaire was prepared in order to elicit the experimental group learners' post-experiment impressions, opinions and improvement suggestions about the program. The questionnaire simply consisted of six items: the first three were multiple-choice questions (structured items) and the other three were open-ended (unstructured items). It explored learners' opinions in regard to such points as the academic content they have studied, the session step sequence, the CD layout, the pros and cons of the program and the recommendations for improving the program (See appendix M in this volume). For constructing this tool, the researcher followed some recommendations suggested by Ary et al. (1979: 176-178):

❋ Constructing the questionnaire in such a way that it reflects quality.

❋ Keeping the questionnaire as brief as possible so that it requires a minimum of the respondents' time.

❋ Phrasing the questionnaire item so that they can be understood by every respondent.

❋ Phrasing the questionnaire items so as to elicit unambiguous answers.

❋ Giving exhaustive answers to the various questionnaire structured items.

❋ Arranging questions in a correct psychological order.

The results of analyzing learners' answers of this questionnaire are discussed in detail at the end of this chapter.

Designing the Study Material

In order to carry out the experiment of the study at hand, the researcher designed the following material:

[1] The CALL Program.

[2] The Lecturer's Guide.

[3] The Students' Guide.

The CALL Program

Program Objectives

The main objective of the current CALL Program: "Develop Your Mechanics of Writing" was, as the name implies, to develop the EFL college Learners' use of mechanics of writing. This general objective was divided into a number of behavioral objectives that were feasible to measure (See Appendix B in this volume).

Program Teaching Plan

Implementing this program required eight sessions. Each session took an hour. The following table identified the number, the content and the duration of sessions:

Table (7): CALL Program Teaching Plan

Session	Content (Rules + Exercises + Answers)	Duration
1	Introduction + Commas	1 hour
2	Semicolons + Colons	1 hour
3	Periods + Quotation Marks + Slashes	1 hour
4	Dashes + Hyphens + Italics + Ellipses	1 hour
5	Capitalization	1 hour
6	ie & ei + -cede, -ceed & -sede	1 hour
7	Adding Prefixes + Adding Suffixes	1 hour
8	Words Often Confused	1 hour
8 Sessions		*8 hours*

This schedule was implemented during the first semester of the academic year 2006 / 2007 (See appendix I in this volume).

Program Description

The CALL program, *Develop Your Mechanics of Writing*, was designed by the researcher via Microsoft Power Point. It consisted of one hundred and twenty five (125) slides (See appendix J in this volume). The program had three main sections: Rules, Exercises and Answers. The following table identifies the number of slides in each section:

Table (8): Distribution of CALL Program Slides

Program Section	Number of Slides
Cover, Main Index and Introduction	4
Rule Indices	2
Exercises Indices	2
Rules	33
Exercises	42
Answers	42
Total	**125**

Program Content

The content of the program was the same as the one included in the students' essay course save the answers part. The content handled three components of writing mechanics: namely, punctuation marks, capitalization and spelling. Concerning punctuation marks, the content manipulated the most problematic ten marks for students. As for spelling, the content concentrated on five areas that had proved to be the most annoying for EFL college learners (See the pilot study results in chapter one). In short, the content of the program in hand displayed

eighty four (84) rules and thirty eight (38) exercises with their answers
of sixteen items as shown in the following table:

Table (9): CALL Program Content

Mechanics Components	Sub-items in each component	Number of Rules	Number of Exercises
Punctuation	Commas	12	3
	Semicolons	4	3
	colons	7	3
	Periods (Full Stops)	4	3
	Quotation Marks	6	3
	Slashes	4	3
	Dashes	3	3
	Hyphens	4	3
	Italics	4	3
	Ellipses	2	3
Capitalization		10	3
Spelling	ie & ei	2	1
	-cede, -ceed & -sede	3	1
	Adding Prefixes	1	1
	Adding Suffixes	5	1
	Words Often Confused	13	1
Total	**16**	**84**	**38**

For setting the standard rules, the researcher consulted such resources as Rude (2006: 139-150 and 173-192); Michigan (2004: 114-122 and 135-183); Straus (2004); Gaballa (2003: 7-122); King (2003: 55-174); Leggett et al. (1985: 110-183) and Warriner (1982: 425-477 and 560-582).

Program Content Judgment

Before implementing the program, it had been judged by professional professors (See appendix F in this volume). Both the scientific content and the CD layout were credited as valid.

The Lecturer's Guide

The lecturer's guide was prepared so as to help whoever applies the current CALL program in the future. It contained detailed session plans following certain steps: objectives, teaching aids, warm-up, content and exercises. The lecturer's guide explained the lecturer's role in the current program. A pamphlet of exercises model answers was attached to the lecturer's guide (See appendix K in this volume).

The Student's Guide

Like any new product, the CALL program should have a guide to instruct its user. As a result, the researcher prepared a student's guide, in which she explained the program objectives, outlined the program sessions and provided comprehensive instructions on how to use the program (See appendix L in this volume).

Carrying Out the Experiment

Having prepared and designed the different tools of the study, the experiment was ready to be carried out. A number of systematic steps were followed to achieve that:

1. Administering the pretest to the whole sample in the first session that took place on Saturday, September 30, 2006.

2. Handing out each student in the experimental group a student's guide before beginning the program.

3. Applying the suggested CALL program according to the predetermined plan (See appendix I in this volume). This took eight weeks – starting on Saturday, October 7, 2006; and finishing on Saturday, November 25, 2006 – as each session lasted for one hour per week. The application took place at a computer lab at the Faculty of Education, Kafr El-Sheikh University. The lab capacity was twenty (20) students – each on a separate set – therefore, the experimental group was divided into two groups.

4. Administering the questionnaire after the last session of the program to the experimental group. To feel free to answer, students were allowed to take the questionnaire at home. A deadline was determined to hand the questionnaire to the researcher.

5. Administering the posttest to the whole sample in the last session on Saturday, December 2, 2006.

6. Analyzing students' scores on the pre-posttest using convenient statistical techniques (This is handled in detail in chapter four).

7. Discussing the obtained results (Also tackled in chapter four).

8. Giving some recommendations to prompt and direct further research in the area under study (See chapter five in this volume).

Observation

Results of the Post-Experiment Questionnaire

Being the main target as well as the most subjects concerned with this study, the experimental group students were asked to evaluate the CALL program and the entire experiment they had gone through. That was why the researcher thought it was useful to elicit their opinions, impressions and responses to the CALL program and the instructional strategy adopted by a post-experiment questionnaire (See Appendix M in this volume).

The Academic Content of the Program (First Item)

The number of the experimental group students who regarded the academic content of the program as excellent was equal to that of the students considered it as very good (47.5 % for each choice). A small number of learners described it as good (only 5%). No student considered the academic content to be neither fair nor poor.

⌨ The Learning Step Sequence (Second Item)

The majority of the experimental group learners agreed that the step sequence they had followed each session was excellent (65%). The rest considered it as very good (35%), and no vote went to any inferior classification.

⌨ The Layout of the CD (Third Item)

Almost half the experimental group learners regarded the CD layout to be excellent (45%). A less number reckoned it to be very good (37.5 %). Inferior classifications got marginal percentages of votes: (7.5 %) for the "Good" choice and (10 %) for the "Fair" choice.

⌨ **The Experiment Merits (Fourth Item)**

Unlike the previous three structured items, the fourth questionnaire item was unstructured. Learners wrote their opinions freely. There were common as well as unique answers. Some of the experimental group learners stated a number of common merits of the experiment. For instance, 20 % of the students praised the program comfortable learning environment. Breaking the usual routine of the teaching and learning processes was a merit for 32.5 % of learners. At the same time, 27.5 % of learners highlighted the merits of self-learning, self-evaluation and learners' positive participation. Feedback represented in model answer slides was praised by 17.5% of the experimental group learners. Twenty percent of learners pointed out that one of the program merits was that information remains longer in memory due to addressing more than one sense. Increasing the motivation to learn via employing technology was also stated by 15 % of learners as an advantage. The highest percentage of learners, 42.5 %, believed that the advantage of the program lay in better understanding and enough practice. Saving time and effort was a merit stated by 12.5 % of learners.

Some experimental group learners gave original unique merits. Among such merits was the small number of learners attending the computer lab session which created a better interaction and assured the quality of learning. Another original merit stated by a learner was that the current program respected the individual differences between learners, allowing each to learn at his / her own pace. The well-organization of the CD slides and the systematization of the session time were also highlighted.

▣ **The Experiment Demerits (Fifth Item)**

This item also involved common and unique demerits. Most learners (40 %) complained of the occasional breakdown of computer sets. CD sound lack of clarity was another demerit stressed by 12.5 % of learners. Moreover, 17.5 % of learners believed that the program was defected by the confusion resulting from the difficult words in either rule examples or exercises. Time insufficiency was another complaint of 20 % of learners. Besides, 5 % of learners expressed dissatisfaction with the examples and practice insufficiency. Ten percent of learners wrote: "No demerits at all".

Some learners gave original unique demerits. For instance, a learner stated that many students were not familiar with computers. Another shed light on the lack of revision on what was studied in the previous sessions. The most sarcastic demerit was that computers had bad effect on eyes!

▣ **Suggestions for Improving the CALL Program (Sixth Item of the Questionnaire)**

The last item of the questionnaire, applied to the experimental group learners, elicited their suggestions to improve the CALL program. Twenty five percent of learners recommended the maintenance of computer sets. Increasing the time allotted to each session was advocated by 17.5 % of learners. Furthermore, 35 % of learners suggested giving more examples and more exercises. Allowing learners to take the CD at home was a basic demand of ten percent of learners. In addition, applying the program to all grades and all courses was recommended by 25 % of learners.

Some learners came up with such unusual suggestions as adding warm-up questions to the program CD, giving hints during the sessions about the ABCs of using computers, giving a written test after each session and using headphones to make use of pronunciation.

CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter manipulates the statistical analysis of the data obtained by administering the pre-posttest to the study sample.

The current study problem was previously summed up in the question that read: *Does the suggested CALL program affect the development of EFL learners' mechanics of writing?* Four sub-questions flowed from this main one. Thus, four hypotheses were formulated so as to study the effect of the suggested program on each of the three mechanics of writing components.

Testing the hypotheses required designing an experimental study in which a pre-posttest was administered. The obtained results of the two administrations were statistically treated, analyzed and discussed as follows:

Analysis of Pretest Results

In order to determine which statistical technique should be adopted, a number of tests had to be made in regard to the pretest scores:

[1] Test of Homogeneity

Popham and Sirotnik (1973: 140) state the following formula for testing homogeneity:

$$F = \sigma_{larger}^{2} \div \sigma_{smaller}^{2}$$

Where:

F = the value of testing homogeneity.

σ_{larger}^{2} = the larger variance.

$\sigma_{smaller}^{2}$ = the smaller variance.

The two groups' scores on each mechanic component as well as the total score of the pretest were tested for homogeneity:

Table (10): Test of Homogeneity for the Pretest Scores

Mechanics Components (Pretest Scores)	F
Punctuation	1.21
Capitalization	**2.11***
Spelling	1.63
Total	2.06

* Significant at the 0.01 level

The results indicated that the obtained F for all components scores as well as the total score save capitalization was less than the critical value. Thus, <u>the two sample groups were nearly homogeneous</u>.

[2] Skewness Coefficient

In order to test the symmetry of the curve for a frequency distribution, the skewness coefficient had to be tested using the following formula (El-Sayed, 1979: 457):

$$S = 3 (\chi - Md) \div \sigma$$

Where:

S = is the skewness coefficient.

χ = the mean.

Md = the median.

σ = the standard deviation.

The skewness coefficient was calculated for the two groups' scores on each mechanic component as well as the total score of the pretest:

Table (11): Skewness Coefficient of the Pretest Scores

Mechanics Components (Pretest Scores)	Skewness Coefficient (s)	
Punctuation	Control Group	**1.205**
	Experimental Group	.393
Capitalization	Control Group	-.533
	Experimental Group	.357
Spelling	Control Group	-.077
	Experimental Group	-.257
Total	Control Group	.957
	Experimental Group	.759

It was found that the skewness coefficient was either moderately or fairly symmetric for all mechanics components and the total score (since $1 > s > -1$) except for punctuation scores of the control group.

The above adopted tests proved that some of the conditions of using *t-test* were not fulfilled. Consequently, the One-Way Analysis of Variance (ANOVA) was used to analyze the pretest scores.

[3] Analysis of Variance

In order to figure out the (ANOVA), the following formulae were brought into effect (Ary et al., 1979: 152-155):

Table (12): Analysis of Variance Formulae used in the Current Study

Value	Formula
T_{SS}	$T_{SS} = \Sigma x_C^2 + \Sigma x_{Exp.}^2 - \dfrac{(\Sigma x_C + \Sigma x_{Exp})^2}{n}$
B	$B = \dfrac{(\Sigma x_C)^2}{n_1} + \dfrac{(\Sigma x_{Exp.})^2}{n_2} - \dfrac{(\Sigma x_C + \Sigma x_{Exp})^2}{n}$
W	$W = T_{SS} - B$
T_{SS} df	$T_{SS} \text{ df} = n - 1$
B df	$B \text{ df} = \text{No. of Groups} - 1$
W df	$W \text{ df} = T_{SS} \text{ df} - B \text{ df}$
B_{Ms}	$B_{Ms} = B_{SS} \div B \text{ df}$
W_{Ms}	$W_{Ms} = W_{SS} \div W \text{ df}$
F ratio	$F = M_{Sb} \div M_{Sw}$

The table below shows the results of the pretest (ANOVA):

Table (13): The Analysis of Variance of the Pretest Scores

Mechanics of Writing Components	Source of Variance	Sum Squares	df	Mean Squares	F
Punctuation	Between Groups	33.8	1	33.8	**.598**
	Within Groups	4412.15	78	56.566	
	Total	4445.95	79		
Capitalization	Between Groups	18.05	1	18.05	**1.779**
	Within Groups	791.5	78	10.147	
	Total	809.55	79		
Spelling	Between Groups	.8	1	.8	**.041**
	Within Groups	1519.15	78	19.476	
	Total	1519.95	79		
Total	Between Groups	84.05	1	84.05	**.594**
	Within Groups	11036.7	78	141.5	
	Total	11120.75	79		

The critical F equals 6.96. Accordingly the obtained F values of the three mechanics components as well as the total score of the test were insignificant at the (0.01) level of significance.

The following table contains the pretest means of both groups on the four dependent variables to be compared later on with their posttest means

Table (14): Pretest Means

Mechanics Components	Groups	χ
Punctuation	Control	10.13
	Experimental	11.43
Capitalization	Control	9.35
	Experimental	10.3
Spelling	Control	20.88
	Experimental	20.68
Total	Control	40.35
	Experimental	42.4

Analysis of Posttest Results

The same procedures that were previously traced in dealing with the pretest scores – so as to determine the convenient statistical technique to be used – were followed before analyzing the posttest scores.

[1] Test of Homogeneity

Table (15): Test of Homogeneity for the Posttest Scores

Mechanics Components (Posttest Scores)	F
Punctuation	1.43
Capitalization	1.06
Spelling	2.07
Total	1.60

The obtained F for each mechanics component and that of the total score were less than the critical F at the 0.01 level. Accordingly, <u>the two groups were homogenous.</u>

[2] Skewness Coefficient

Table (16): Skewness Coefficient of the Posttest Scores

Mechanics Components (Posttest Scores)	Skewness Coefficient (s)	
Punctuation	Control Group	.546
	Experimental Group	-.323
Capitalization	Control Group	-.373
	Experimental Group	-.999
Spelling	Control Group	-.519
	Experimental Group	-.245
Total	Control Group	.338
	Experimental Group	-.628

The Skewness Coefficient of the posttest scores – in regard to the three components of writing mechanics and the total score – was either <u>moderately or fairly symmetric</u> (since $1 > s > -1$).

[3] *t-test*

Since the three conditions of using *t-test* – homogeneity, moderate or fairly skewness and a more-than-thirty sample number – were available in the case of the posttest scores, *t-test* was found to be the most convenient technique to analyze the posttest scores.

This study design made use of two independent groups – the control group and the experimental one – rather than using repeated measures. Hence, the *t-test* formula for independent samples was to be adopted.

The researcher activated a number of statistical formulae: *t-test* formula for independent sample (El-Sayed, 1979: 467), df for independent samples, and the effect size formula [d] (Hays, 1981: 356).

Table (17): *t-test* Formulae Used in the Current Study

Value	Formula
t (for independent samples)	$t = \sqrt{\dfrac{\overline{\chi_1 - \chi_2}}{\dfrac{\sigma_1^2 + \sigma_2^2}{n - 1}}}$
df (for independent samples)	$df = 2n - 2$
d (Effect Size)	$d = \dfrac{2t}{df}$

The table below shows the results of the posttest *t-test*:

Table (18): *t-test* of the Posttest Scores

Mechanics Components	Group	n	χ	σ	df	t	d	Effect Size
Punctuation	Control	40	25.375	13.04	78		1.409	Large
	Experimental	40	42.325	10.92		6.223*		
Capitalization	Control	40	11.575	3.42	78		.839	Large
	Experimental	40	14.4	3.31		3.707*		
Spelling	Control	40	26.125	5.061	78		.838	Large
	Experimental	40	29.725	3.362		3.699*		
Total	Control	40	63.08	18.44	78		1.407	Large
	Experimental	40	86.45	14.56		6.213*		

* Significant at the (0.01) level (The critical value of *t* is 2.63).

Testing Hypotheses

★ Hypothesis One

There is no significant difference between the posttest mean scores of the treatment group learners and those of the control one on English punctuation conventions.

In order to test this hypothesis, the *t-test* formula for independent samples was adopted. The following table puts it in a nutshell:

Table (19): *t-test* of the Posttest Punctuation Scores

Group	n	χ	σ	df	t	d	Effect Size
Control	40	25.375	13.04	78		1.409	Large
Experimental	40	42.325	10.92		6.223*		

* Significant at the (0.01) level.

Statistical two-tailed *t*-table show that when the degree of freedom (df = 2n-2 in this case) equals 78, the obtained *t* that equals 6.223 is significant beyond the 0.01 level of confidence as the critical *t* equals 2.63. Moreover, the size of the effect of the independent variable (the CALL Program) on the dependent one (Punctuation) proves to be large, since d = 1.409 > .8.

Since the calculated *t* is greater than the critical one, it can be concluded that there is a significant difference between the posttest mean scores of the treatment group learners and those of the control one on English punctuation conventions in favor of the experimental group. Hence, the null hypothesis can be rejected and the alternative one can be accepted. Consequently, the answer of the first research sub-question that reads: Is the suggested CALL program effective for developing EFL learners' English punctuation conventions, will be: Yes, the suggested CALL program is effective for developing EFL learners' English punctuation conventions.

★ **Hypothesis Two**

There is no significant difference between the posttest mean scores of the treatment group learners and those of the control one on English capitalization.

The *t-test* formula for independent samples was brought into effect so as to test this hypothesis. The following table sums up the data:

Table (20): *t-test* of the Posttest Capitalization Scores

Group	n	χ	σ	df	*t*	d	Effect Size
Control	40	11.575	3.42	78		.839	Large
Experimental	40	14.4	3.31		3.707*		

  * Significant at the (0.01) level.

Consulting the statistical two-tailed *t*-table, the researcher found that when the degree of freedom (df = 2n-2 in this case) equals 78, the obtained *t* that equals 3.707 is significant beyond the 0.01 level of confidence where the critical *t* equals 2.63. Besides, the effect size of the independent variable (the CALL Program) on the dependent one (Capitalization) is large, since d = .839 ≈ .8.

Results refer to the fact that the calculated *t* is greater than the critical one. Thus, one can conclude that there is a significant difference between the posttest mean scores of the treatment group learners and those of the control one on English capitalization in favor of the experimental group. As a result, the null hypothesis can be rejected and the alternative one can be accepted. So, the answer of the second research sub-question that reads: Is the suggested CALL program effective for developing EFL learners' English capitalization, will be: Yes, the suggested CALL program is effective for developing EFL learners' English capitalization.

★ Hypothesis Three

There is no significant difference between the posttest mean scores of the treatment group learners and those of the control one on English spelling.

Testing this hypothesis entailed using the *t-test* formula for independent samples. The following table puts it in a nutshell:

Table (21): *t-test* of the Posttest Spelling Scores

Group	n	χ	σ	df	*t*	d	Effect Size
Control	40	26.125	5.061	78		.838	Large
Experimental	40	29.725	3.362		3.699*		

 * Significant at the (0.01) level.

Statistical two-tailed *t*-table shows that when the degree of freedom (df = 2n-2 in this case) equals 78, the obtained *t* that equals 3.699 is significant beyond the 0.01 level of significance as the critical *t* equals 2.63. In addition, the size of the effect of the independent variable (the CALL Program) on the dependent one (Spelling) proves to be large, since d = .838 ≈ .8.

Since the calculated *t* is greater than the critical one, it can be concluded that there is a significant difference between the posttest mean scores of the treatment group learners and those of the control one on English spelling in favor of the experimental group. Accordingly, the null hypothesis can be rejected and the alternative one can be accepted. That is to say that the answer of the third research sub-question that reads: Is the suggested CALL program effective for developing EFL learners' English spelling, will be: Yes, the suggested CALL program is effective for developing EFL learners' English spelling.

★ **Hypothesis Four**

There is no significant difference between the posttest mean scores of the treatment group learners and those of the control one on the mechanics of writing test total score.

The *t-test* formula for independent samples was brought into effect. The following table sums up the data:

Table (22): *t-test* of the Posttest Total Score

Group	n	χ	σ	df	*t*	d	Effect Size
Control	40	63.08	18.44	78		1.407	Large
Experimental	40	86.45	14.56		6.213*		

 * Significant at the (0.01) level.

Consulting the statistical two-tailed *t*-table, the researcher found that when the degree of freedom (df = 2n-2 in this case) equals 78, the obtained *t* that equals 6.213 is significant beyond the 0.01 level of significance where the critical *t* equals 2.63. Moreover, the size of the effect of the independent variable (the CALL Program) on the dependent one (Test Total Score) proves to be large, since d = 1.407 > .8.

Results refer to the fact that the calculated *t* is greater than the critical one. Thus, one can conclude that there is a significant difference between the posttest mean scores of the treatment group learners and those of the control one on the mechanics of writing test total score in favor of the experimental group. Therefore, the null hypothesis can be rejected and the alternative one can be accepted. Consequently, the answer of the fourth research sub-question that reads: Is the suggested CALL program effective for developing EFL learners' mechanics of writing as a whole, will be: Yes, the suggested CALL program is effective for developing EFL learners' mechanics of writing as a whole.

Discussion of Results

The rejection of the null hypotheses tested in this study referred to the fact that Computer-Assisted Language Learning did enhance EFL college learners' mechanics of writing.

In respect of the first component of mechanics of writing, using punctuation marks correctly, the first hypothesis was formulated and tested. The CALL group students made progress in their learning of punctuation conventions. As results indicated, there was a significant difference between the posttest mean scores of the CALL group

learners and those of the traditional one on English punctuation conventions in favor of the CALL group (Table 19 in this volume). The figure below indicates that difference:
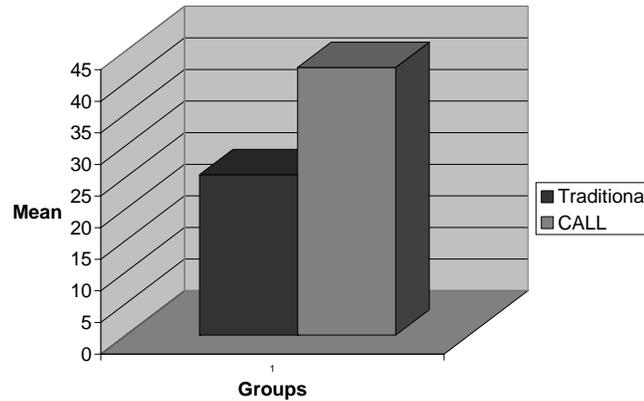

Figure (5): Difference in Mean Scores of the Posttest Punctuation Conventions

The sessions of punctuation marks were relatively more difficult for learners than the capitalization and spelling sessions as they contain either perplexing or long number of rules. Still, the CALL group students took the advantage of reviewing and revising the rules freely if they needed. This increased their learning survival. Although the traditional group learners also improved in their use of punctuation conventions – as the comparison of their pretest with posttest mean scores indicated, their improvement was due to the traditional instructional method they received. However, this improvement of the traditional group students was less than the improvement of the CALL ones. Consequently, it does not diminish the role of the suggested CALL program in developing EFL learners' use of punctuation conventions.

In regard to capitalization, the second component of mechanics of writing, the testing of the second hypothesis showed that the CALL group students' use of capitalization developed (See Table 20 in this volume). This development is pointed out by the following figure:
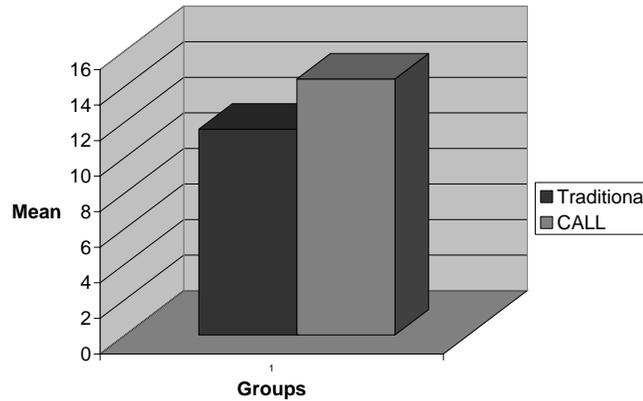

Figure (6): Difference in Mean Scores of the Posttest Capitalization

The capitalization section was the shortest in the program. It took one session and was not integrated with punctuation marks as planned in most courses. Learners' sense of achievement was quite higher in the capitalization session than in the other two components sessions. Such a high sense of achievement increased their interaction giving them a good chance to review rules for several times and answer the exercises more comfortably. Statistical analysis of the posttest data proved that the CALL group's improvement in using capital letters correctly was more significant than the traditional one's.

Spelling, the third investigated mechanics of writing component, turned out to be better developed by using the current CALL program. The statistical analysis of the third hypothesis proved that the CALL

group students' spelling developed (See Table 21 in this volume). The figure below indicates that development:
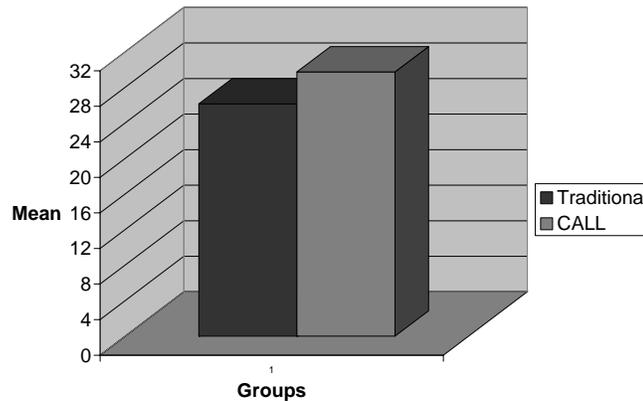
Figure (7): Difference in Mean Scores of the Posttest Spelling

Learners enjoyed the spelling section in particular; for the exhaustive examples not only provided them with spelling standard rules, but enriched their vocabulary storage as well. A worthy note taken by the researcher during the spelling sessions was that many students devoted a notebook to write down the meaning and the correct pronunciation of the new words. Keeping these words by heart guaranteed and fostered the correct use of spelling rules.

This fact was crystal clear on comparing the pretest with posttest mean scores of both groups on spelling. Findings concluded that there was a significant difference between the posttest mean scores of the CALL group learners and those of the traditional one on English spelling in favor of the CALL group.

Yet, this result does not agree with DerMovsesian's (2001) study in which he concludes that computer programs do not improve students' spelling in their writing. In spite of the fact that the traditional group learners' spelling was developed – as the comparison of their pretest

with posttest mean scores indicated, their spelling development was attributed to the traditional instructional method they received. But, the spelling development of the CALL group students exceeded that of the traditional group ones. So, the suggested CALL program was better than the traditional method in developing EFL learners' spelling.

The fourth hypothesis was concerned with mechanics of writing as a whole represented in the achievement test total score. Statistical analysis of data proved that the CALL group students made progress in their learning of mechanics of writing (Table 22 in this volume). The following figure briefs that progress:
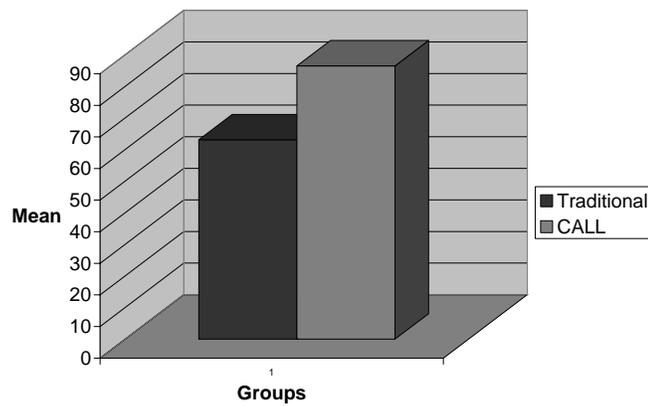

Figure (8): Difference in Mean Scores of the Posttest Total Score

This progress was measured by comparing the CALL group students pretest with posttest mean total scores as well as comparing their posttest mean total scores with the traditional group students' ones. As results indicated, there was a significant difference between the posttest mean scores of the CALL group learners and those of the traditional one on the mechanics of writing test total score in favor of the CALL group.

However, this result is different from Gomez's (1996) who has stated that the use of technology develops some – but not all – components of mechanics.

Although the traditional group learners' use of mechanics of writing also improved – as the comparison of their pretest with posttest mean scores indicated, their improvement was due to the traditional instructional method adopted in the essay lecture. Nonetheless, this improvement of the traditional group students was less than the improvement of the CALL ones. Consequently, the suggested CALL program excelled in developing EFL college learners' mechanics of writing.

The significant differences between the CALL group and the traditional one in the posttest scores were attributed to the suggested CALL program: *"Develop Your Mechanics of Writing"* due to a number of reasons. For instance, it gave students either positive or negative feedback through correcting their answers to the exercises. Besides, it enabled students to interact with each other, to improve their achievement and to freely use the authentic material. These reasons went in accord with Al-Hamshary (2006) and Lee (2000).

Moreover, the suggested CALL program offered a simple way to move from the different slides – from rules to exercises to model answers – smoothly due to employing hyperlinks. Even those learners who were not quite familiar with computers found no difficulty in using the program CD after receiving brief instructions before the first session and reading the student's guide. This coincides with McKay (1998).

In addition, the suggested CALL program acted as a mechanical tutor that never grew tired or judgmental. This reason for the program effectiveness went in accord with the characteristics of the behaviorist CALL (Warschauer and Haely, 1998).

Practically, making use of certain instructional techniques and strategies during the implementation of the CALL program positively increased its effectiveness. Some co-operative and peer editing activities were adopted during the warm-up and the exercises phases of each session. These activities turned out to be very effective for prompting learners and dispelling their boredom resulting from the traditional instruction routine. Accordingly, their motivation to learn increased. This is consistent with the results of such studies as El-Said's (2002), Hopkins' (2002), Kollig's (2002), Mahmoud's (1997).

Another value lies in integrating writing to other skills as much as possible. Voice was added to the program to read examples and provide learners with correct pronunciation of the difficult words. So, writing was integrated with listening. This integration greatly contributed to increasing the CALL program utility as asserted in the findings of such studies as Ibrahim's (2003), Aly's (2001) and Chrisman's (1996).

As concerns evaluation, the self-evaluation technique adopted in the study at hand bore evidence of being very useful and encouraging for mechanics of writing learning process. When learners' answers of the given exercises were self or peer evaluated, they did not feel embarrassed or ashamed of their mistakes. Consequently, their learning environment was more comfortable and their tension was

eased. This goes in accord with such studies as Eissa's (2003) and Stemper's (2002).

Advocating the individualized and self-learning in the current CALL program did not marginalize the lecturer's role. The lecturer was a supervisor who interfered when needed to prompt learning or amend a misunderstanding. The interactive atmosphere between the lecturer and learners positively affected the program. This is consistent with the findings of such researchers as Lambert (1999).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is divided into three principal parts the first of which serves as a summary of the main pillars of the study such as the study problem, the methodology and the obtained results. The second part is a conclusion and the third one includes recommendations for further research.

Summary

📖 The Study Problem

The problem of the current study can be concisely summed up in the following principal question:

*** Does the suggested CALL program affect the development of EFL learners' mechanics of writing?***

📖 Research Sub-questions

The above stated question was divided into a number of more specific questions:

1 – Is the suggested CALL program effective for developing EFL learners' English punctuation conventions?

2 – Is the suggested CALL program effective for developing EFL learners' English capitalization?

3 – Is the suggested CALL program effective for developing EFL learners' English spelling?

4 – Is the suggested CALL program effective for developing EFL learners' mechanics of writing as a whole?

📖 **Research Hypotheses**

In order to carry out the experiment, the previous sub-questions had to turn into measurable hypotheses. Consequently, the following null hypotheses were formulated:

1 – There is no significant difference between the posttest mean scores of the treatment group learners and those of the control one on English punctuation conventions.

2 – There is no significant difference between the posttest mean scores of the treatment group learners and those of the control one on English capitalization.

3 – There is no significant difference between the posttest mean scores of the treatment group learners and those of the control one on English spelling.

4 – There is no significant difference between the posttest mean scores of the treatment group learners and those of the control one on the mechanics of writing test total score.

📖 **The Sample**

Eighty fourth-year students of English Department in Kafr El-Sheikh at the Faculty of Education were randomly chosen. They were randomly divided into two groups: the control group and the experimental one. The experimental group studied the specified content using the CALL program, while the control one studied it as usual. Each group contained forty subjects.

📖 **The Study Design**

The current study adopted an experimental design: namely, the Randomized Groups, Pretest-Posttest Design. In this design, the treatment was introduced only to the experimental group for allotted

time. The control group received the traditional teaching technique. Having finished the experiment, both groups were measured on the dependent variable.

 Tools of the Study

The study at hand contained three tools:

● A pilot study (prepared by the researcher) to confirm the existence of the study problem.

● A pre-posttest (prepared by the researcher) in mechanics of writing administered to all subjects of the sample before and after the experiment.

● A questionnaire (prepared by the researcher) for measuring to what extent the experimental group estimates the program.

 Research Material

- A CALL program (designed by the researcher) used to develop learners' mechanics of writing.

- A lecturer's guide (prepared by the researcher) for using the suggested CALL program.

- A student's guide (prepared by the researcher) for using the suggested CALL program.

 Statistical Analysis of Data

The raw scores obtained from administering the pre-posttest were statistically analyzed via One-Way ANOVA and *t-test* – the most adequate techniques to the current study – and hypotheses were tested at the 0.01 level of significance.

 The Obtained Results

The statistical analysis of data resulted in rejecting the four null hypotheses. Hence, the suggested CALL program did prove to:

(1)   have a significant effect on EFL college learners' use of English punctuation conventions.

(2)   have a significant effect on EFL college learners' use of English capitalization.

(3)   have a significant effect on EFL college learners' use of English spelling.

(4)   have a significant effect on EFL college learners' use of English mechanics of writing as a whole.

Conclusion

Mechanics of writing is not a decoration. It is a writing sub-skill that has its importance in the entire writing process. Hence, research has been interested in exploring various techniques and designing diverse programs to enhance this sub-skill.

The current study was an attempt to contribute to the set of knowledge related to this area. It employed modern technology (Computer-Assisted Language Learning) so as to develop EFL college learners' mechanics of writing. Results referred to the fact that integrating CALL into the essay writing course of EFL college learners had already proved to be effective in developing learners' knowledge and use of English mechanics of writing.

Recommendations for Further Research

The outcomes of this study may be used to inspire further research. The following are the suggested recommendations of the researcher for the subsequent studies:

❋ The replication of the current study using larger samples of different educational stages is recommended so as to determine to what extent the outcomes of the current study can be generalized.

❋ Further research should also investigate the effect of using CALL programs to develop other writing sub-skills such as writing the topic sentence, generating ideas and so on.

❋ CALL programs effects on other language skills like reading, speaking and listening should also be studied.

❋ Researchers are suggested to investigate to what extent CALL programs can be employed in teaching and learning translation.

❋ During the application of the program, it has been noticed that learners' motivation to learn increases. Thus, studies should examine the relationship between using CALL programs and learners' motivation to learn L2.

❋ It is suggested that further research should be done to examine the effectiveness of using CALL in teaching grammar inductively.

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