Title: The Impact of Invention Techniques upon Egyptian Students' Compositional Writing in EFL

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:Abstract

This article reports on the qualitative findings into an experimental study into the impact of invention techniques upon students' writing. Set in the context of Egyptian EFL teaching in a university setting, the study investigated how students' composition writing was affected by the use of invention techniques to support the process of writing.   The article outlines the principal characteristics of students' writing at the outset of the study, and then reports on the same students' writing after using the invention techniques. Statistical data highlighted how the two experimental groups had improved their writing more than the control group at a level of statistical significance. This article describes the nature of that improvement and suggests that invention techniques have a benefit to EFL writers which goes beyond that of simply supporting the generation of ideas.

The Impact of Invention Techniques upon Students' Compositional Writing in EFL

Introduction

The basic assumption behind the use of invention techniques in writing is that students are more motivated to write, and write more effectively, when they have been prepared for the writing task. This approach is intended to answer some of the particular needs of foreign language learners and solve some of the problems facing them. It attempts to reduce the difficulty facing EFL/ ESL students when writing in English, and make the writing task more manageable and rewarding for non-native students by contextualizing it in several ways. Invention techniques are principally those strategies which writers use, or here, which teachers can help writers to use, to help them generate ideas for writing. They take a variety of forms, including free association, cubing, or brainstorming, and more structured formats like lists, or matrices of questions to answer about the topic. Invention techniques are especially helpful when seeking a focus for a composition and relating a specific writing topic to a broader subject area.

Like any other pedagogic approach, an approach based on invention techniques does not exist in isolation. Its theoretical basis is an understanding of composition as a process which has emerged from research on writing in the last thirty years (Emig, 1971; Perl, 1980; Sommers, 1980; Zamel, 1976, 1982). The process-based paradigm of writing focuses on writing processes; teaches strategies and techniques for invention and discovery; considers audience, purpose, and context of writing; and emphasizes recursiveness in the writing process. By contrast, the product-based paradigm stresses expository writing, makes style the most important element in writing, and maintains that the writing process is linear, determined by writers before they start to write (Connor, 1987; Grabe & Kaplan, 1996).

In Egypt, however, English composition has been taught to EFL students within the product-based paradigm; that is, pedagogical attention has focused on the compositions that students produce, rather than on how they are written. Accordingly, composition teachers have usually done extensive pre-teaching of

grammatical and rhetorical structures, most often with the aid of a standard writing text. Students are presented with models of correct compositions which exemplify various rhetorical rules (e.g., every paragraph must have a topic sentence and two to six supporting sentences) and rhetorical modes, such as description or comparison and contrast. After analyzing these models, students are expected to copy them exactly or with minor syntactic modifications, e.g., '*Rewrite the following paragraph using the correct form of the past or future tense.*' (Seltzer et al.,1981: 87). In some cases, students are told to imitate the model, writing another paragraph or composition on a slightly different subject. The emphasis throughout is on using correct forms and avoiding errors of punctuation and grammar, rather than on content and expression. Arguably, a strength of this approach is that '*It gives the students a sense of progress and improvement which builds confidence in their ability to write, and motivate them to further improve their writing ability*' (Dykstra and Paulston, 1972:209).   It has been criticized, however, for its inability to teach true composition skills or to enable students to express themselves fluently in free writing.

Still within the product-based paradigm, the free composition method is sometimes the preferred methodology. This is defined by Cave (1972:62) as '*The attempt to achieve proficiency in writing through unrestricted practice*'. In free composition '*students are presented with a topic and are then free to write as they please*' (Pincas, 1982:110) but it does rely on a reasonable level pre-existing writing competency and may only be suitable for advanced level ESL/EFL students (Paulston, 1973).   Critics of free composition argue that it ignores the importance of explicit support in developing writing comptence. Rivers (1972: 258) asserts that '*Writing is a skill that must be taught; it cannot develop haphazardly to any degree of usefulness*'   and Harris (1975:305) claims that in the free composition class '*the teacher is engaged in a form of testing rather than teaching*'.

Within the process-based paradigm, Faigley (1986) identifies two groups, the expressivists and the cognitivists. The expressivist movement appeared in the first decades of the twentieth century, and reached its climax late in the 1960s and early 1970s.   Proponents claim that writing is an art in which the discovery of individual expression and personal thought is '*as important as the product -*

the self discovered and expressed' (Berlin, 1988: 484). Elbow (1981) views writing as a kind of '*magic that can be performed by anyone who is involved in and believes in his or her tale*' (1981: 369). However, these conceptualisations of the personal growth which can be effected through writing were evolved largely in the context of L1 writers and do not necessarily address the particular needs of L2 learners. On the other hand, the cognitivist movement which appeared in the late 1970s has had more effect upon ESL/EFL research and teaching. Cognitivists view writing as a thinking and problem-solving process, and the writer's mental processes are of central importance to them. Leaders of the cognitivist movement such as Flower and Hayes 1981a; Zamel 1983; Spack 1984; Raimes 1979; Emig 1971; Bereiter and Scardamalia 1987 have had a great impact upon ESL/ EFL classrooms. In most classrooms, teachers prepare their students to write through invention and other prewriting techniques (Lauer, 1970), encourage several drafts of writing, require writing revision, and delay the student correction of sentence-level mistakes until the final editing stage.

Invention techniques are principally associated with the first stage of writing, the planning or generation of ideas stage. Daubney-Davis (1982:1) describes them as techniques used to think productively about a subject. They are used by writers as an aid in finding a subject or an angle from which to view the subject, for narrowing the scope of the discourse to fit within whatever limitations exist, and for choosing the best structure in which to develop one's topic. These invention heuristics support writing by forcing them to shift perspectives and to make connections between their own experiences and those of other writers (Klatt, 1995). The value of using invention techniques with ESL/EFL writers has been attested by several researchers (Oluwadiya, 1992; Zamel,1982; Spack,1984; Xu, 1990). The two invention techniques used in this research are brainstorming and cubing. Brainstorming invites students to free associate all their ideas and responses to a topic. It helps students to activate their own knowledge and ideas related to the assigned topic through a process of free association. Cubing involves a swift consideration of a subject from six points of view. Daubney-Davis (1982: 6) states that this invention process can be visualized as covering all six sides of a cube which holds the subject inside. The six sides of the cube are: describing, comparing, associating, arguing, analysing, applying. Students should examine the topic by brainstorming a few minutes at

each side of the cube, working consistently (3 to 5 minutes or more for each side). This structured technique is recommended for ESL/EFL students because of its simplicity. (Hughey *et al.,* 1983).

The Study:

The research study investigates what impact the use of invention techniques have upon EFL students' compositional writing. Set firmly in the Egyptian EFL context, the research involved three parallel groups of students. The population included 175 students of the English Department in a University Faculty of Education from which 120 students were randomly chosen for the study in order to avoid researcher bias and to provide scientific research strength (Maisel & Persell, 1996; Nachmias & Nachmias; 1996). These 120 students were randomly assigned to three groups of forty students: two experimental groups and one control group, by drawing name by name and assigning it to each group.

The study sample was thus divided into a control group and two experimental groups. The control group were taught in the conventional manner of EFL teaching in Egypt, that is, principally through the setting of a composition topic and then being asked to write about it. The two experimental groups were taught differently, one group being introduced to brainstorming techniques as a supportive strategy before beginning writing; and the second group being introduced to cubing techniques. Compositions written before the research intervention began were collected from all students in the sample groups, and further compositions were collected from all groups at the end of the study for comparison.

The data collected was subject to both quantitative and qualitative data analysis, though this article focuses upon the outcomes of the qualitative analysis. The compositions were scored using the English as Second Language Composition Profile (ESL Profile – see Appendix A) and statistical comparisons made between the groups. The statistical comparisons established the homogeneity of the three research groups at the start of the study and indicated the extent of the improvement of the three groups at the end of the research, both relative to each other, and relative to their initial performance.   The qualitative analysis was conducted upon a sub-sample of students' compositions: eighteen pieces of

writing from the pre-intevention stage and eighteen from the post-intervention stage (from the same students).   The qualitative analysis adopted a linguistic content analysis approach, based upon the ESL Profile, and drawing upon the previous methodological experience of linguistic content analysis of one of the researchers (Myhill ,1999). Each of the categories in the ESL Profile (content, organization, vocabulary, language use and mechanics) was used as a qualitative content category, and during the analysis, any emerging observation of patterns and tends was captured as a memo, adopting an iterative process of visiting and revisiting the data. After this, a system of tallying was used to give an overview of the three groups' writing patterns.   75% of the scripts were analysed by two researchers independently and the results compared, in order to cross-validate the judgements and ensure reliability.

The ESL Composition Profile was originally developed because of the need for an accurate and objective way to evaluate and place students in the appropriate classes within the university (Hughey et al, 1983). It attempts to categorize the criteria for effective writing, and this potentially makes it a good tool for both teachers and students. For teachers, the ESL Composition Profile helps to evaluate and grade students' writings. For students, it is not only a learning tool for evaluating their writing progress but for recognizing, practising, and employing the principles of writing as well as improving their writing.

The Findings

Characteristics of Writing in the Pre-Intervention Writing Samples

The qualitative analysis of the pre-intervention writing samples helped to establish the principal characteristics of the writing in the control and experimental groups at the start of the study.   Both the quantitative and qualitative assessment demonstrate that there were no differences in the standard of writing between the three groups and, indeed, they shared common difficulties.

The compositions tended to be very short, often a single paragraph, and thus undeveloped. The weakest compositions comprised a few sentences only, and revealed writers struggling to articulate basic ideas about the topic and an inability to sustain and develop the argument:

Candidate 93: 'Addiction is a big problem in our life. This problem fase the people when they start him life because several problem in him life. One of this problem is father and mother not interested in his children.'

More able writers wrote longer pieces, though these still tended to be a single paragraph, Although these more competent writers introduced more ideas and made a better attempt at arguing a case, they still lacked substantive explanation and development of the thesis.

The brevity and lack of development in the sample compositions meant that the majority of compositions revealed little sense of textual organisation, either at whole text level or at paragraph level.   However, a small number of students did display a simple textual organization of their compositions. There was an introduction which presented the problem of addiction; a body in which the students discussed the causes and the effects of addiction as well as some of its solutions; and a conclusion which completed the argument. In the introduction, students used certain opening clauses e.g. '*No one can deny that;*', '*There isn't the least doubt that*' which were effective beginnings, establishing the genre and viewpoint quickly.   Organisation at inter and intra paragraph level was considerably less secure.   Despite the students sometimes using some linguistic connectives within each paragraph such as *in fact, no doubt, hence, really, but, then, so, finally, as a result, because* to emphasize the relationship between ideas and to establish coherence, there were no links between paragraphs and thus logical sequencing across the text was not apparent.   Furthermore, where students used an introductory or topic sentence for a paragraph, this was rarely sustained throughout the rest of the paragraph.

The vocabulary used in the compositions was heavily reliant on vocabulary items introduced in the title, and it was evident that students had only a limited vocabulary repertoire which matched the topic of the composition. This lack of topic-related vocabulary not only hindered the ability of the student in articulating his or her ideas, but is likely to be a strong contributory factor to the lack of development and brevity in the writing.

Although most of the students demonstrated basic mastery of sentence constructions, effective control of sentence structure was less evident. Control of subordination through use of the relative pronoun was generally secure. However, there was a tendency to produce over-long sentences, creating sentences with too many ideas per sentence. One cause of these long sentences was excessive chaining of ideas through simple co-ordination, particularly '*and*': for example, '*he loses also his future and life and he turns into a bad man who doesn't do anything well and he will lose the trust of his friends and family and he turns from a young man into an old one*'.

Perhaps less surprisingly, the sample writing showed numerous incidences of grammatical and spelling errors, typical of learners of a second or foreign language. Omitted verbs, subject-verb disagreements, and spellings reliant on phonic reproduction of English sounds were common. Students generally demarcated sentences correctly with an initial capitalisation and a terminating full stop: however, there was very limited use of internal sentence punctuation such as the comma or the semi-colon.

- Insert Table 1 here -

Characteristics of Writing in the Post-intervention Samples

The second stage of qualitative analysis, upon the post-intervention samples, indicated the nature and extent of the impact the invention techniques had made upon the students' writing. The statistical analysis (see Appendix B) revealed that both experimental groups had made a statistically significant greater improvement than the control group, thus confirming the beneficial effect of the invention techniques. Both the statistical analysis and the qualitative data revealed that there were no significant differences in the quality of writing of the two experimental groups. However, the statistical analysis does not provide detailed information about the nature of the improvement in writing, and whether some sub-skills improved differentially relative to others. In this respect, the qualitative analysis has both confirmed and enriched the findings represented by the statistical data.

Whilst all groups tended to increase the length of their compositions over the period of study, this characteristic was more marked in the two experimental groups and was accompanied by a qualitative difference in content.   The experimental groups' writing developed the topic of the title in greater depth than the control group, and they appeared to be more able to elaborate and explain their ideas.   So, for example, one student was able to explore a definition of the word 'addiction' with some confidence:

Candidate 8: 'Addiction is a serious problem that threatens the youth all over the world. Generally, addiction means to be used to doing something regularly and it is not harmful in all times but it could be useful sometimes as when you say: I'm addicted to praying,……or I'm addicted to reading books. But the meaning of addiction we are talking about is addiction of drugs and alcohol drinks.'

Likewise, the following student considers the consequences of addiction, both upon the individual and upon society:

Candidate 8: 'The danger of addiction is in the effects of it. It destroys the central neurvous system and this is an uncurable disease which may cause death. It also lowers blood pressure and destroys lungs and nasal cells. It might also lead to heart attacks. Not only diseases are caused by addiction , but also other effects which harms the community around him. When someone addects to drugs he turns into another person marked with anger, lie, theift and deviation; he looses people's respect and everybody would hate him, as he will be a hated man.'

One striking qualitative difference between the control group and the experimental groups was in the quality of textual organisation.   In the pre-intervention analysis, it was evident that organisation of discourse at text level, and at inter and intra paragraph level was an area of weakness.   In the post-intervention samples, the experimental groups managed the organisation of their ideas with greater dexterity.   There were more examples of clear introductions and effective conclusions, and the use of paragraphing increased. Many of these paragraphs were appropriately organised around a single topic or proposition, often introduced by a topic sentence.   Logical sequencing improved

through the use of appropriate linguistic connectives or through the use of a particular sequence such as the order of importance, although confident linking between paragraphs remained less secure.   By contrast, the control group remained insecure in textual organisation, with limited or no introductions and conclusions, and with a main body of discourse which lacked logical sequencing and development.

The control's group command of vocabulary showed some improvement during the research period, but the improvement was less significant than that of the experimental groups.   Some students in the control group remained very dependent upon vocabulary items in the title, and their lack of relevant synonyms meant that some vocabulary items were repeated, for example, two students over-used the verbs *deal* and *make* in their compositions.   With more able students in the control group, there was a more adequate range in vocabulary, particularly topic-related vocabulary e.g. *dangerous, habit, troubles, enjoy, destroy, progress, society, absence of the parents, cigarettes, drugs, cancer, leads to death, drinking, destructive, useless, government, jobs, responsibility, mass-media, advertisement, punishment, co-operate, safety, illnesses, life, victims, friends, kill, national economic, families, stealing, youth, destruction* which supported the communication of ideas.

Students in both experimental groups showed a more sophisticated range and effective word choice in the post-intervention writing. As with the control group, there was an increase in topic-related vocabulary: *bad friends, money, bad bringing up, negligence, absence of parents, central nervous system, lungs, blood pressure, cancer, Aids, robbery, illness, death, crimes, unemployment, youth, hospitals, nasal cells, headache, ignorance, over-population, dangerous, smoking, drugs, drug-dealers.*   In addition, there were more incidences in the experimental groups of students adopting an appropriate register by using phrases such as '*as a matter of fact*' and '*no one can deny*' which were effective in establishing the genre and viewpoint quickly, or by using the pronoun *we* and *our* to address the reader. A further difference was that the experimental groups seemed to have developed a greater repertoire of verbs to support their writing: *considered, eliminate, examine, increase, affect, amass, urge, trust, respect, spread, support, connected, deviate, threaten, afford, escape, solve, destroy,*

steal, face, compare, correct, attract.   The vocabulary improvement in the control group appeared to be more closely associated with an increase in topic-related nouns and adjectives, whereas the experimental groups had improved on a wider range of lexical items, including verbs.

Students' post-intervention compositions in the two experimental groups revealed an improved mastery of sentence construction.   There was less reliance on co-ordination, and indeed, some students demonstrated command of sophisticated coordinating constructions such as *not only.......but also* ('*Not only diseases are caused by addiction, but also other effects which harms the community around him').*   Short, simple sentences, such as '*There are many causes of addiction'* or '*There are bad effects of this addiction*' were used effectively for expression of clear arguments or statements. When sentence constructions were well-managed, there was more variety in sentence structure: e.g. simple subject verb object sentences, '*it has a bad effect on our life*', main clause plus relative pronoun, '*it means that...;', ' no one can deny that.....*'; fronted subordinate clause, '*if we examine our society.....*'; and sentences beginning with an adverbial, '*as a matter of fact.....*' or non-finite clause, '*to solve this problem...'.*   Despite these improvements, there was, nonetheless, a tendency to repetition of certain clause structures in many of the compositions. In particular, constructions such as Subject plus *should*; *There are* or *such as*, followed by a list; and a main clause followed by a relative pronoun occurred regularly.   By contrast, the control group had considerably less variety or effectiveness in sentence structure.   Whilst more able students used basic constructions effectively, particularly the use of relative clauses, in general, students' compositions were dominated by errors, notably in subject-verb agreement and in the management of tenses.

A further significant difference between the control group and the two experimental groups was in the differential improvement of spelling and punctuation.   There was a very marked decrease in spelling errors in the two experimental groups whilst the control group retained a high rate of inaccuracy in spelling. Likewise, the experimental groups tended to use punctuation with greater accuracy and range than the control group. A variety of punctuation marks was used correctly in their writings such as: the use of full stops to end

sentences; the use of commas to separate items in a list, and to signal discourse markers; the use of colons to introduce a list; and semi-colons to separate two or more independent clauses that were closely related. However, the control group deployed punctuation marks inconsistently to demarcate sentence boundaries and did not seem confident about when to use different punctuation marks. The full stop, the comma, the colon, and the semi-colon were used haphazardly, for example, '*we can say that: this problem has spread so large portion in our country.'*

- Insert Table 2 here -

Discussion: the impact of the invention techniques

It is perhaps least surprising to find that the use of invention techniques has supported these writers in developing the content of their compositions. Invention techniques are quintessentially generational tools, which aid the production of ideas by encouraging verbal fluency and by avoiding the evaluation of ideas at the production stage.   It seems evident from the data analysis that the opportunity to use brainstorming or cubing was a successful cognitive strategy for moving from superficial development of the composition topic to more substantive elaboration.   It appears that invention techniques helped writers to tap into ideational schemata for the topic which more linear approaches to writing do not encourage. It is also possible that the process of brainstorming and cubing permitted greater switching between L1 understanding of the topic and L2 expression of those ideas. Equally, the collaborative context of the invention techniques, whereby writers worked in groups on the brainstorming and cubing appears to have allowed the writers to construct and share knowledge together.

However, the most apparent weakness in the improved content of the two experimental groups was the tendency to listing.   This, too, can be traced directly back to the invention techniques which encourage production and listing of ideas.   Whilst the techniques have undoubtedly supported the generation of ideas from master topic to sub-topics, the explanation and elaboration of ideas at sub-topic level is still weak. In Bereiter and Scardamalia's (1987) terms, these writers are still at a *knowledge-telling* stage where they express what they know,

rather than a *knowledge-transforming* stage where they are able to manage the information on behalf of the reader and in line with the demands of the text type.

In similar vein, it is relatively easy to suggest a parallel between the generation of ideas as the basis for the construction of a text and the generation of vocabulary at word level. The improvement in both range and appropriacy of vocabulary in the two experimental groups can be directly related to the activities of brainstorming and cubing which generated ideas at the macro level which required lexical items to express them at the micro level. Thus the improvement in quality and range of nouns and adjectives, in particular, is arguably a predicatable outcome of the use of invention techniques. However, the substantial improvement in the quality of verbs used, contrasting with the writing of the control group, is an interesting finding. Nominalisation is usually a more concrete linguistic activity, attributing a referent to an idea, whereas verbs can represent more complex linguistic activity. Narrative action is often conveyed through simple verbs with concrete associations with action (for example, *jump; hide; hit*) which does not necessarily require sophisticated linguistic articulation. However, many of the verbs used by writers in these compositions conveyed ideas and relationships rather than concrete actions (eg. *considered, increase, affect, urge, trust, respect, support, connected, deviate, threaten, afford, solve, compare, correct, attract)*. These verbs were a significant factor in raising the quality of expression because they allowed writers to demonstrate in writing higher levels of abstract thinking. It may be that the collaborative talk which accompanied the brainstorming allowed more oral rehearsal of these verbs. This aspect of improvement in writing in response to invention techniques would benefit from further research.

The improvement in textual organisation as a consequence of the use of invention techniques is more surprising. On the one hand, the availability of greater linguistic and thematic resources in terms of ideas, produced through brainstorming and cubing may have meant that textual organisation improved simply because the writers had more ideas to organise. Given that all these students are literate in their first language and understand textual organisation in Arabic, then the mere fact of greater substantive content being generated before writing may have permitted this organisational improvement. It is

possible that during the act of writing more cognitive attention could be devoted to structure and organisation because less cognitive attention needed to be devoted to the production and expression of ideas. Sharples (1999: 92) notes that working memory, *'the means by which we mentally store and process information',* makes demands which can interfere with composing: in this case, freeing up working memory from the need to produce ideas and vocabulary items may have reduced the interference with textual organisation during composition. This would be consistent with Cognitive Load Theory which claims that writers cannot cope with too much simultaneous demand upon the short term or working, memory, and that writing occurs more easily where prior knowledge makes schemas *'readily available in long term memory that can easily be retrieved into short term memory'* (Valcke, 2002:152). The brainstorming and cubing processes assist in developing that prior knowledge explicitly before writing, acting as an advance organiser, and reducing cognitive load during composition.

Likewise, the improvement in sentence structure and spelling in the two experimental groups may be attributable to the reduction of cognitive load, allowing greater attention to be devoted to these areas. Certainly, advocates of invention techniques have never claimed that using these techniques will improve accuracy and efficiency at sentence and word level, as is the case in this study. Rather, many would argue that the point of invention techniques is about removing the need to think about accuracy in favour of generating and elaborating ideas. But it does appear that an unexpected benefit of pre-writing attention to the generation of ideas may be a consequential increase in accuracy and effectiveness, perhaps because writers are able to think more about how they shape and construct their words and sentences.

The study has demonstrated, both through quantitative and qualitative data analysis, that invention techniques do improve ESL/EFL composition writing. However, perhaps the greater significance of the study is in its investigation of how invention techniques impact upon writing and in illuminating how invention techniques relate to the process of composition. Bereiter and Scardamalia (1980) note the problems weak or novice writers have in terms of cognitive overload, when writers are *'so hampered by low-order problems of getting*

language onto paper that they have little capacity left over for higher order concerns with content' (1980: 81). It does seem that invention techniques may alleviate this difficulty by dealing, in part at least, with content first, thus reducing the overload.   Indeed, Collins and Gentner (1980) conceptualise writing in terms of idea production and text production, where idea production is a free-ranging, non-linear activity capturing ideas through brainstorming and such like, whereas text production is the imposition of linguistic order upon ideas (1980: 58). Set within a theory which envisions '*writing as a process of generating and editing text within a variety of constraints*' (Collins and Gentner, 1980:52), invention techniques appear to provide support not only for the generation of ideas, which one might have predicted, but also for the generation and editing of text.   Thus they may allow greater attention to the act of writing as 'design' (Sharples, 1999:10) in which the writer manipulates 'embryonic' materials, such as lists and brainstorms into texts, shaped appropriately for their purpose and audience.   Whilst invention techniques can only ever be part of a pedagogic repertoire for the teaching of writing, the outcomes of this study suggest that their value is not insignificant, and may be more far-reaching than initially conceived.

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	CONTROL GROUP, AND EXPERIMENTAL GROUPS 1 AND 2
Content	Poor knowledge of topic, leading to short, non-substantive compositions with limited development of ideas, elaboration or explanatory detail.
Organisation	Poor organization of the writing with little sense of introduction, development, or conclusion. Little evidence of effective links made between paragraphs
Vocabulary	Limited use of topic-related vocabulary, reflecting an inadequate range of vocabulary suited to purpose. Some errors in word choice and word form.
Language Use	Sentence construction often over-complex in length, or over-co-ordinated. Frequent errors in agreement, tense, number, articles, pronouns, prepositions, and deletions.
Mechanics	Poor mastery of basic conventions, including frequent spelling errors, and limited use of internal sentence punctuation. Sentence demarcation through initial capitalisation and final full stop largely correct.

Table 1: Summary of the characteristics of writing in the pre-intervention sample.

	CONTROL GROUP	EXPERIMENTAL GROUPS
Content	Compositions longer than pre-intervention but content still undeveloped. Some compositions showed knowledge of subject and increase in composition length. Some compositions showed poor knowledge of subject. Their compositions were non-substantive and incomplete.	Well-developed compositions, knowledgeable, substantive, and relevant to the topic. Compositions richer in content and longer than in pre-intervention. Tendency to deal with the topic through lists.
Organisation	Poor organization (students relied heavily on the wording of the title). Little development or logical sequencing. Poor organization within paragraph and among paragraphs.	Good textual organization (introduction, development, and conclusion). Organization within paragraph and among paragraphs improved. Logical sequencing improved.
Vocabulary	Weak students showed poor knowledge of English vocabulary and word form. Errors of word choice and word form. More able students showed adequate range in topic-related vocabulary.	Word form mastery. More effective word choice and usage. Highly appropriate register. Good range of verbs and topic-related vocabulary.
Language Use	Poor mastery of sentence construction rules. Major problems in simple and complex constructions. Several errors in agreement, tense, number, articles, pronouns, and prepositions.	Basic mastery of sentence construction. Effective use of simple constructions. Variety in sentence structure. Limited range in subordination. More effective coordination. Fewer errors in agreement, tense, articles, pronouns, prepositions, and number.
Mechanics	Poor mastery of conventions Frequent spelling errors Incorrect use of punctuation marks.	Better mastery of conventions. Marked decrease in spelling errors. Correct use of a variety of

	Poor layout and handwriting.	punctuation marks.
	Correct sentence demarcation and initial sentence capitalisation	Correct sentence demarcation and initial sentence capitalization.
		Good paragraphing.

Table 2: A summary of the Characteristics of Writing in the Post-Intervention Sample.

APPENDIX A: THE ESL COMPOSITION PROFILE

ESL Composition Profile

Student **Topic**
Date

	Score	Level Criteria

Score   Level   Criteria

Content

30-27   EXCELLENT TO VERY GOOD: knowledgeable.
ubstantive • thorough
development of thesis • relevant to assigned topic
26-22   GOOD TO AVERAGE: some knowledge of
adequate range .

velopment of thesis • mostly relevant to topic, but lacks detail
FAIR TO POOR 21-17: limited knowledge
of subject • little

Organization

20-18   EXCELLENT TO VERY GOOD: fluent
ideas clearly s(ated/
supported • succinct • well-organized • logical
cohesive
17-14 GOOD TO AVERAGE:
somewhat   choppy   •   loosely
organized but main
ideas stand out• limited

Vocabulary

20-18   EXCELLENT TO VERY GOOD: sophisticated
ffectiveword/idiom
choice and usage • word form mastery •
ate register
17-14
O AVERAGE: adequate range • occasional errors of word/idiom
form, choice, usage *but meaning not obscured*
FAIR TO POOR: limited range • frequent errors of word/idiom form,

Language Use

EXCELLENT TO VERY GOOD: effective
complex
constructions • few
errors of agreement,
tense, number, word
order/function, articles,
pronouns,
prepositions
O AVERAGE 21-18: effective but simple
ions • minor prob
ems in complex constructions • several errors of
,agreement, tense
number, word order/function, articles, pronouns,
prepositions but mean

Mechanics

5
EXCELLENT TO VERY GOOD: demonstrates mastery of conventions •
few errors of spelling, punctuation,
capitalization, paragraphing
OD TO AVERAGE   4:
sional errors   ofspelling, punctuation,
tali   zation, paragraphing but meaning not
scured
3   FAIR TO POOR: frequent errors of spelling,
punctuation, capitalization,
paragraphing • poor handwriting • meaning
confused or obscured

APPENDIX B: THE RESULTS OF THE STATISTICAL ANALYSIS

ANOVA results for the post-test in **Content**					
	Sum of Squares	DF	Mean Square	F	.Sig
Between groups	627.72	2	313.86	7.29	001.
Within groups	5038.15	117	43.06		
Total	5665.87	119			
ANCOVA results for the post-test in **Organization**					
Source	Sum of Squares	DF	Mean Square	F	.Sig
Corrected model	423.87	3	141.29	6.52	<.001
Intercept	3940.38	1	3940.38	181.88	<.001
Pre-Organization	119.32	1	119.32	5.51	021.
GroupK	288.17	2	144.09	6.65	002.
Error	2513.06	116	21.66		
Total	116589	120			
Corrected Total	2936.93	119			
ANCOVA results for the post-test in **Vocabulary**					
Source	Sum of Squares	DF	Mean Square	F	.Sig
Corrected model	766.10	3	255.37	10.66	<.001
Intercept	2787.16	1	2787.16	116.35	<.001
Pre-vocabulary	386.58	1	386.58	16.14	<.001
GroupK	403.87	2	201.94	8.43	<.001
Error	2778.89	116	23.96		
Total	101643	120			
Corrected Total	3544.99	119			
ANOVA results for the post-test in **Language Use**					
	Sum of Squares	DF	Mean Square	F	.Sig
Between groups	880.87	2	440.43	8.22	001. >
Within groups	6270.60	117	53.60		
Total	7151.47	119			
ANCOVA results for the post-test in **Mechanics**					
Source	Sum of Squares	DF	Mean Square	F	.Sig
Corrected model	89.51	3	29.84	12.21	<.001
Intercept	200.46	1	200.46	82.03	<.001
Pre-mechanics	40.40	1	40.40	16.53	<.001
GroupK	48.01	2	24	9.82	<.001
Error	283.48	116	2.44		
Total	7565	120			
Corrected Total	372.99	119			
ANOVA results for the post-test in **Total Score of the composition writing test**					
	Sum of Squares	DF	Mean Square	F	.Sig
Between groups	9443.40	2	4721.70	8.67	001. >
Within groups	63746.53	117	544.84		
Total	73189.93	119			