Introduction

Despite the growing conviction expressed in many ESL circles that the most crucial language learning objective is fostering an adequate reading ability such that students can function independently as readers of English, the need to be able to write in English still exists in many parts of the world. Be it the first, second or foreign language, it is a major educational understanding which is unlikely to diminish appreciably in the near future, bearing in mind that some measure of writing competence is essential in many spheres of life. It is especially indispensable to academic success as, more often than not, the evaluation of what has presumably been learnt is through its manifestation in the written form. In fact, many universities have begun to recognize the importance of writing within the learning process, with the result that greater emphasis has been put on developing students' writing abilities. This is especially pertinent in the second or foreign language context for compounded to the inherent difficulties of writing itself are added those of expressing oneself appropriately and clearly in a different language and a different culture.

Compared to reading, there is a definite lack of research on writing and this paucity has contributed to much of the unknown surrounding the process of writing and other related issues. It is only recently that a greater number of research studies have been devoted to writing as a result of a shift in focus of interest from reading to writing in language education. (Barrs, Myra: 1983) it is thus not surprising that the study of writing has about it the aura and excitement of a new discipline in its infancy, although interest in writing is not something new. In fact, the dearth of research studies investigating writing had been identified as early as 1963 by Braddock, et al. in their report on research in written composition. However, the orientation then was heavily product based; the review of the state of knowledge in composition was organized around such elements as factors that influence writing, instructional approaches and their influence on writing ability, frequency of writing and class size, vocabulary and spelling. In emphasizing products, many of these research studies had ignored the most crucial element, that is, the writer himself and what he does when he attempts a writing task.

What is new about the recent studies on writing are the attempts by researchers to redress this neglect. This new focus is the result of the realization of many researchers that an investigation of the written products does not actually reveal much about the instructional needs of the learners. An
adequate understanding of the cognitive process of composing is necessary before strategies can be
devised to affect its outcome, that is, the written products. It is with this belief in mind that many
researchers are now exploring writing behaviours, convinced that only by studying and
understanding the process of composing can they actually gain insight into how to teach it. Thus, the
focus of research on writing has shifted to a more basic consideration, attempting to answer the 'how'
of composing rather than the 'what if' of methods. However, it would be erroneous at this point to
conclude that all recent research studies on writing are or should be process oriented. There is still a
place for studies that contrast the efficiency of certain approaches (for example, peer versus teacher
feedback of a product); pedagogically, the findings of such studies can be used together with the
insight gained about the composing process as a result of process oriented studies.

Research on the Composing Processes of Native Writers

Among the first to study the composing process was Emig (1971) whose case study of the writing
behaviours of eight twelfth grade students remains a classic. The subjects were asked in four sessions
each to give autobiographical accounts of their writing experiences and to compose aloud three times
in the presence of a tape recorder and an investigator.

While composing, her subjects seemed to exhibit a variety of behaviours, all of which indicated the
non-linear nature of writing. More importantly, it was found that writing involved a continuing
attempt to discover what it is one wanted to say. Contrary to the assumptions held about writing then,
the writer does not have a preconceived idea of what he wishes to say, neither does he know what the
final product will be like. It is the process of putting his thoughts down on paper which helps to
crystallize and refine his initial vague notion of his intended message. While writing, he might
abandon what he thought was important before the onset of the task and take off in a totally different
direction. Viewed from this perspective, writing is a process of discovery, of exploring one's
thoughts and learning from the act of writing what these thoughts are. The direction of the writing is
not charted and false starts and blind alleys are common.

The findings of Emig's study were crucial as many pedagogical materials and approaches of writing
had presumed a linear sequence of pre-writing, writing and revising. Thus, for the first time, there
were indications that the theory and practice of writing were two different things. In effect, the
complexity of the nature of writing had cast doubts on the wisdom of traditional approaches of
writing which require students to formulate ideas beforehand, to elaborate upon them by using some
rhetorical framework, and to organize them by some set of guidelines.

Asserting that Emig's study did not actually determine conclusively the cognitive process involved in
writing, Stallard (1974) had attempted to redress this by utilizing a group of high school students
identified as good writers on the basis of the STEP Essay Writing Test, as subjects. Fifteen students
who ranked highest in the STEP test were chosen. A second group of fifteen students selected at
random served as a comparison group. The rationale offered was that differences between good and
'average' writers would be more striking than differences between good and poor writers. However, it
is personally felt that this rationale is faulty as the random selection would have included a whole
spectrum of differing writing abilities and to compare the writing behaviours of this heterogeneous
group (in terms of writing ability) to one that is more or less homogeneous does not necessarily lend
much clarity to the findings. Furthermore, it was erroneous to equate students selected at random as
being 'average' as the underlying assumption was that such students make up the average writing
class. This might not necessarily be true. In addition, it seemed more logical to assume that the
differences between good and poor writers would be more striking than those between good and a randomly selected group.

The techniques employed were interviews with the students to obtain feedback on what they consciously remembered attending to while writing, observation of writing behaviours and examination of the products themselves. The assignment and setting of the study were quite similar to most school sponsored activities.

The findings indicated that there were some differences and similarities in the writing behaviours of the two groups. Good writers appeared to spend more time in both the period of pre-writing and writing; they were also slower writers, writing half as many words per minute as the randomly selected group. They also changed more words as they wrote. Although most of the changes were single word changes, a significant number of multiple word changes occurred. In addition, while good writers changed significantly more paragraphs than the randomly selected subjects, the total number of paragraph changes was small compared to the total number of revisions made. The good writers made many of the changes during the process of reading their papers at intervals during the process of writing, and stopped frequently to read over what they had written.

Both groups of writers displayed concern for the mechanics of writing and made spelling corrections on their papers. This finding contradicted that of Ernig's where the good writers were found to be not overly concerned with the mechanics of writing but to crystallize their thoughts on paper. In addition, neither group showed any propensity for formal or informal planning of the essay, or thought about the audience for their writing.

Although Stallard believed that the methodology employed would capture the cognitive processes of his subjects as they wrote, a closer examination of the procedure used reveals that this assumption may not be warranted. The approach was still heavily product based; the essays written by the students appeared to be the main crux of the study. If only revision strategies were studied, this would not be a limitation. However, as the actual process of composing itself seemed to be the major focus of the study, this proved to be a drawback. Furthermore, it is highly doubtful if the cognitive processes of writing can be inferred from the students' observable behaviours. Pertinent information on the categorizing of these observable behaviours is lacking with the result that one is left floundering. There is also the question of the subjectivity of the interpretation of the students' behaviour as only the investigator himself carried out the observation. In addition, a quantitative description of the differences in the revisions of good and randomly selected students is inadequate; a more qualitative approach detailing the type of changes, whether surface or text based would be more meaningful. Information is also lacking as to what good writers actually do during the longer span of time they took for prewriting.

Mischel (1974) also carried out a case study on the composing process of a twelfth grade writer, Clarence. As far as could be ascertained, the subject was not selected on the basis of any language or writing criteria. In terms of methodology, this study closely resembled that of Emig's, utilizing composing aloud procedure, interviews and examination of the products.

A series of narrative writing tasks, starting from autobiography and proceeding through the more extensive modes such as biography, memoir, chronicle and reportage, were set. In addition, a short story as well as an argumentative piece of expository writing were included. Although there was no time limit, each piece was completed during a school period each of which lasted forty-five minutes.
It was found that the amount of time spent on pre-writing was very short; 2-3 minutes. Much of the planning was done in the head although the amount of time taken for planning depended greatly on the writing task. Unlike the findings of Emig, which indicated the non-linear nature of writing, Clarence's composing process proceeded in a chronological, linear fashion. However, he rescanned often to orient himself to the direction of his writing.

The use of the technique of composing aloud proved to be unsatisfactory and did not present much insight into his actual structure of sentences as the subject verbalized little of his reasons for adding a word or deleting it. This could be attributed to the nature of the technique which would conceivably intrude on the writing process. The writer might be so involved with formulating his thoughts that he forgot to verbalize them aloud. Furthermore, this technique requires a very unnaturally heightened awareness of what one is doing and thinking.

It was found that Clarence rarely did any correction although a certain amount of revising was carried out. No large-scale rewriting was done.

As there was no evidence of any set of criteria being used in the selection of the subject, the task of comparing findings of this study with those reviewed earlier is rendered difficult. More data on the type of changes Clarence carried out on his piece of writing would have been helpful.

While the three studies were confined to twelfth grade students, Pianko's (1979) and Perl's (1979) studies concentrated on freshman writers. Pen investigated the composing process of unskilled writers while Pianko's study was more holistic, encompassing three categories, that is, class status (remedial versus traditional) age (typical college entrance versus adult) and sex (male versus female).

In many respects, the findings of Pianko and Perl were similar. Both studies revealed that subjects spent a very short time on pre-writing. This was attributed to the nature of the writing task, as it had been found by other researchers as well (Emig, 1971, Mischel, 1974) that school sponsored writing generated little commitment to the writing task on the part of the students. Perl's subjects in fact wrote with greater fluency and commitment when their writing involved them personally compared to the more objective, impersonalized writing tasks. This finding would appear to indicate that the students did not derive much enjoyment from writing tasks of this nature and were more concerned with getting the task 'over and done with'. This has interesting implications on the type of writing tasks set in school.

Both Pianko's and Perl's subjects indicated that they had no complete conception of what they were going to write when they began writing, acknowledging that they would 'figure it out' as they went along. Both studies also identified the recursive nature of writing. Pianko's subjects frequently paused and rescanned to orient themselves to what they had written for the purpose of deciding what to write next. Similarly, Perl's subjects shuttled back and forth in their writing process, projecting what would come next, doubling back to be sure of the ground they had covered. Contrary to the prevailing assumption then that unskilled writers employed a 'hit and miss' approach, Perl's study showed that even unskilled writers utilized consistent and stable composing strategies in their attempts to discover meaning.

Pianko's group of traditional writers were also similar to Stallard's good writers in that the subjects spent more time planning before and during composing and more often checked what they had written to determine the formulation of the next idea. Where the rate of composing was concerned, there appeared to be an apparent contradiction. Stallard's good writers wrote fewer words per minute compared to the remedial group. This difference in finding could be because the criteria of selection
of subjects were different, and it is highly conceivable that Pianko's group of remedial writers could have a lower language proticiency than the randomly selected group in Stallard's study. The remedial's group's slower pace of writing could also be attributed to their concerns for mechanics, usage and wording during composition. This preoccupation with editing had also been noted by Perl who found that it played a major role in the composing process of her subjects. Editing which was primarily perceived by the subjects as an exercise in error hunting intruded so often that it broke down the rhythm generated by thinking and writing. Their concern with correctness of form which was reinforced by the remedial classes they were attending only served to paralyze their flow of ideas and inhibit the composing process.

Stallard's, Pianko's and Perl's studies also indicated that unskilled writers revealed egocentricity in their writing. (This was also true of Clarence, Mischel's subject.) At a low level of proficiency, writers seemed to be less concerned about communicating their ideas and developing their content. They attended only to surface level changes and often took the readers' understanding for granted, thus neglecting to make their referents explicit. Good writers on the other hand were more concerned with getting their ideas across and took greater pains to make their communication clearer to a reader, incorporating global and meaning-level changes. The importance they attached to communicating their ideas is underscored by the fact that they spent more time contemplating their task, rescanning to see if their plans fit, and then pausing again to reformulate.

Another study on the composing process of college freshmen writers was that by Peitzman (1981) although her focus was primarily on revision. The impetus for her study was to discover how freshmen might write inside the school parameters as earlier studies (Mischel, Pianko, Perl) had established that the composing process was more limited when the context of the writing task was school based. To induce a more conducive setting she had incorporated as much freedom as possible in the writing task and environment so that the students would feel committed to their writing. What was different about her study was a technique which she devised and employed in the study. This was the 'reporting-in' technique which was based on the composing aloud model. Before their first draft, the subjects were asked to talk into a tape recorder about their plans, intentions and feelings. After writing part of their draft, when they came to places where they wanted to 'take a rest', they were asked to report on what they had done so far. Reporting in was also carried out before their third draft, after first reading her comments and responding to them then making additional comments about their plans for the final version.

Peitzman found that her subjects revised as early as moments after the writing task was introduced and that they continued to revise even after their 'final' draft was completed. This was certainly different from the attitude displayed by subjects of other studies towards school sponsored writing. This difference in finding is attributed to the more relaxed environment created, the shouldering of responsibility by the students for their writing as a result of the freedom given to them in defining their topics, the notion that tentative efforts were the norm, opportunities for sharing their writing as well as the time they had for the task.

Schwartz (1983) explored the writing processes of two totally disparate writers that would usually have been slotted into different composing categories. However, they were chosen as both writers managed to transform vague notions into finished writing which expresses ideas and experiences which continue to satisfy them, even after a long period of time after completion. The subjects were an established poet with over twenty years of serious writing and an eleven-year-old boy whose usual opportunities for writing were for school.
Despite the inherent differences between the writers, Schwartz found that the impetus for their writing was an event that pricked their interest; their writing was self-sponsored. Furthermore, the fusion of key meanings in their works appeared late as well as early. In addition, there was the influence of outside sources in shaping the mood and forms of writing. Both writers also viewed rewriting and not just the initial writing as a creative act, where they were still in the process of discovering meaning. Another crucial element was the extended writing experiences that encouraged them to build sufficient revision time into the composing process.

Berkenkotter's (1983) study was a radical change from the earlier composing oriented studies as her subject was Donald M. Murray, who is not only a published writer but an eminent researcher on the process of writing. Her main concern in the study were Murray's planning, revising and editing activities. She found that Murray's planning activities were of two kinds; the first was the stating of process goals, for example, mentioning procedures, and the second was the stating of rhetorical goals, that is, planning how to reach an audience. Murray also had readers for his longer pieces of writing, and much of his planning activity as he revised grew out of reading their responses to his initial draft. Global revision was quite common as the writer shifted gears from editing to planning to reconceiving as he recognised gaps in the text and identified major rhetorical goals. The study also amply supported the recursive nature of composing as the writer frequently moved back and forth between planning, drafting, editing and reviewing.

Although the whole gamut of writers appear to have been researched into, not much has been done on the composing processes of those in certain professions, for example, the medical or technical disciplines. Slezer's (1983) study is indeed timely as it has called attention to this area. He investigated the composing processes of an engineer, Kenneth Nelson who spent approximately half his time on the job writing proposals, reports and correspondence.

The findings indicated that some of Nelson's composing habits closely approximated those of professional writers and skilled academic writers. It was found that he spent a considerable amount of time planning and inventing content. An impressive array of invention procedures were utilized, such as analyzing audiences, reading, consulting colleagues, brainstorming, and reviewing previously written documents. In addition, his outlines were intricate, detailed and formal. Thus, it was not surprising that his actual writing proceeded smoothly and efficiently as he had detailed plans and outlines ready. Revision was subsumed to other concerns in his writing process. This was different from Murray's writing concerns where revising formed a substantial part of his composing process. In fact, the revision done by Nelson was very minor, involving removal of contractions, simplifying diction, deleting unnecessary words, correcting spelling and punctuation.

Contrary to most research studies on composing, Nelson's composing process exhibited a linear sequence. His writing activities fell into mutually exclusive and consecutive stages, there was no back and forth movement already established in other researches. Whether this is due to a personal quirk or is influenced by the nature of his job remains to be investigated.

Other than the composing processes per se, the influence of mode of audience and writers' apprehension had also been investigated. Monahan (1984) in his study which investigated the revision strategies used by eight twelfth grade writers as they wrote for two audiences, peer and ~teacher, found that there were distinct differences in the strategies utilized by the different writers.

Generally, it was found that basic and competent writers were capable of the same type of revisions, for the same purposes, at the same points in the composing process. However, competent writers
were more likely to employ a wider range of revisions, and these revisions were more likely to cue additional revisions compared to a basic writer. 

The audience played some dart in the revising process of all the subjects. Basic writers made most of their revisions for the teacher audience while competent writers made most of their revisions for the peer audience. The levels at which dissonance occurred was also related to the levels at which revisions were made. For basic writers, the dissonance was at the word level while for the competent writers, the dissonance was due to their content and style of writing.

Selfe (1984) investigated the pre-drafting processes of four high and four low apprehensive writers. It was found that there were distinct differences in their pre-drafting activities. High apprehensive writers were fearful and lacked confidence when they approached a writing task. The low apprehensives were confident of their ability to produce clear, lucid prose, and expressed no disidence about their writing. The high apprehensives appeared to obtain less rhetorical information about audience and organization from their readings of the assignments. Audience was also ignored by them in their writing. The low apprehensives, however, consistently constructed complex, detailed representations of the audience. In terms of planning, it was found that the low apprehensive writers constructed a general, overall plan before planning locally for the first sentence of their draft. In contrast, the high apprehensive writers often tried to plan locally before they had formulated a general plan for the entire essay.

The low apprehensive writers also used a variety of effective written prefiguring strategies, such as listing, brainstorming, note-making, associational diagramming and outlining to help generate and expand ideas as well as to plan and organize initial essay plans.

Although the selection of subjects was based on the degree of apprehension felt by the writers, the findings of this study were quite similar to those that compare the writing strategies of skilled and unskilled writers, or competent and basic writers. High apprehensive writers appeared to operate under constraints of writing and grammatical rules which impeded their writing process. Similarly, the writing task was looked upon as something that had to be dealt with and got out of the way as soon as possible. In their composing process too, consideration of audience was absent. These parallels appear to suggest that writing apprehension and lack of writing skill may be related, and could be different manifestations of the same complex problem.

A cursory glance of the materials reviewed would indicate that research on the composing process has come a long way since the pioneer study initiated by Emig. However, while these studies, and others of the same vein offer invaluable insight into the composing processes and the differences in the writing behaviours of skilled and unskilled writers, the question arises as to whether the process of composing and the strategies utilized by students of differing levels of proficiency in the second or foreign language are similar to those already established in first language writing. Learning to write in a second or foreign language is undoubtedly quite daunting. The learner not only has to grapple with the task of writing itself, but also the complexities of a language which he is trying to master.

There is a pronounced lack of research in ESL/EFL writing although studies into this area have been initiated. Most of these have drawn on the methodologies utilized for first language research on writing.

**Research on the Composing Processes of ESL/EFL Writers**
Zamel's first study (1982) offers an exploratory look into the composing processes of eight proficient writers. They were proficient in the sense that they were no longer enrolled in ESL writing courses and were successfully completing the writing assigned in university level content area courses. They were interviewed individually about their writing experiences and behaviours. Different stages of their writing were also studied to determine whether their actual writing reflected the experiences that were reported.

Her interviews with the students revealed that different strategies were used to generate ideas before actual writing began. Some reported having some sort of internal dialogue while others read and re-read the course materials until they perceived some direction on how to proceed.

Once actual writing began, it was found that putting their ideas down on paper led to further clarification and generation of ideas. Furthermore, the students mentioned that a great deal of time was necessary, not only for actual writing, but to leave their writing aside and to come back to it repeatedly, and re-read it so that they knew how to proceed. The students also wrote several drafts, indicating their endeavours to portray their message as accurately as possible. Revisions were quite global, involving paragraph changes, deletions and additions of paragraphs as well as insertion of new text which had been written separately on a sheet of paper. However, sentence and syntactic concerns were also attended to. Like Murray, some of the students wrote marginal comments to themselves or used their personal symbols to indicate where information was missing.

In short, writing appears to be a process of discovery, providing a means for discovering, creating and giving form to one's thoughts or ideas. The students displayed writing behaviours which were similar to skilled native writers.

In her second study, Zamel (1983) attempted to further examine the composing processes of advanced ESL students, comprising skilled and unskilled writers, using the techniques of observation and interviews in addition to the students' written products. On the other hand, Raimes (1985) focussed on the writing behaviours of unskilled ESL writers, incorporating the use of think aloud protocols. Despite the different methodologies, the findings of both studies are comparable to those established in first language writing.

Both these studies indicated that the process of composing was creative and might not always be based on a clear sense of direction or explicit plan. In addition, it was recursive as the subjects frequently rescanned so as to generate more ideas on how to proceed further. Zamel's skilled writers showed greater flexibility in their application of their understanding of the recursive nature of writing, sometimes reviewing one sentence or two, sometimes reconsidering an entire idea and frequently rereading whole paragraphs. This was not true of the unskilled writer who attended to grammatical and syntactic changes so much so that her writing process was interrupted. This was similar to the writing behaviours of the unskilled writers reviewed earlier (Stallard, 1974; Pianko, 1979; Pen, 1979). However, Raimes did not find evidence of this behaviour among her unskilled writers. Their purpose of revising and editing was not so much for rectifying errors as for clarifying the fact that they were not intimidated by errors. Knowing full well that they used the language imperfectly, they expected the teacher to correct the language they produced. Thus, they were preoccupied with getting their ideas down rather than locating errors.

However, Raimes' unskilled writers were similar to the unskilled native writers in certain aspects. They spent a very short time on prewriting. The strategies used to get started on the writing task were similar, that is, trying to link the topic with their own experience as they returned to it continuously,
rereading the topic a number of times to get a common link where they could, then proceed. This was also one of the strategies utilized by some of Zamel's proficient writers in her earlier study.

The skilled writers of Zamel's study were similar in their revising behaviour to the skilled native writers. Changes were most often global, involving sentence additions, deletions, shifting of paragraphs and formation of new paragraphs. Similarly, while all the writers attended to surface level changes and features, the skilled writers seemed to be much less concerned with these features and addressed them primarily towards the end of the process.

Where revision strategies are concerned, Heuring's (1984) study is one of the rare few attempted which investigated those strategies utilized by skilled and unskilled ESL writers. He found that skilled writers were able to evaluate the writing task, arranging their priorities to give revision a complementary and productive role in the writing process. Unskilled writers however were unable to strike a balance between the review process and planning or transcribing process, thus resulting in an efficient use of revision.

His unskilled writers were similarly preoccupied with surface level changes which did not significantly improve their writing. Heuring believes that the revising capabilities of his subjects corresponded roughly to developmental stages, and these were comparable to similar findings from L1 research.

The findings of the studies reviewed thus far indicated that the process of writing was similar in L1 and L2. Most of the studies emphasized the cyclical nature of writing, during which the writers move back and forth discovering and analysing and clarifying ideas. However, one of the options open to the non-native writers was that of translating which was identified by Zamel (1982) and Heuring (1984).

The similarities between skilled writers in the L1 and the L2 were striking as were those between the unskilled L1 and L2 writers, thus lending support to Heuring's contention that there was some kind of correspondence between revision strategies and developmental stages. Unskilled writers appeared to be hampered in their writing process by their emphasis on form, believing that a correct text constituted good writing. Skilled writers had a better understanding of what good writing entails.

Limitations of the Studies

Although there appears to be a high degree of consensus among the findings of these studies, they are tentative at best as all these studies utilized the case study approach. Thus, it may not be possible to generalize the findings as the number of subjects was limited. As yet, there has been no conclusive theory on composing although several models have been proposed. Work in this areas is still developing.

The different methodologies employed also constitute a problem in comparing findings and forming conclusive generalizations. Each study in effect used two or more research methods for data collection. These methods were:

1. Making observations of writing behaviours using trained observers. This was carried out by Perl who developed a very elaborate code for this purpose, Pianko, Zamel, (1982, 1983) and Heuring. Staliard, Mischel, Seizer, Berkonketter carried out the observation themselves.
2. Videotaping of the writers as they are engaged in the writing task. This was employed by Pianko, Heuring, Selfe.
3. Interviewing subjects before and or after the writing task so as to obtain feedback concerning the subjects’ attitudes towards writing, their experiences of writing, et cetera. Emig and Pen interviewed their subjects prior to the writing sessions while Mischel, Stallard, Pianko, Pen and Zamel used follow-up interviews to gain information about the behaviours and strategies of the writers during the composing process. Selfe carried out interviews with the students during the initial and final sessions while Monahan interviewed teachers as well as the students.

4. Employing composing aloud protocols in an effort to glean some insight into the writers' cognitive processes. This was first initiated by Emig and was also used successfully by Berkonketter, Monahan, Selfe and Raimes. However, Mischel, Pen and Heuring did not report much success with this method.

5. Reporting-in. This was developed and used by Peitzman.

The most common methodology appears to be a combination of observation of the writing behaviours, interviews with the subjects and examination of the products. In view of the bewildering array of techniques used, it is no small wonder that a comparison of the findings appears almost impossible. Some of the techniques may possess certain weaknesses.

Although interviews appear to be indispensable in gathering data from the students, there is a very real possibility that subjects may not be entirely frank with the interviewer. The 'interviewer effect' may influence the findings as the subjects may well articulate what they think that the researcher would want to hear. Furthermore, it can only be carried out on subjects of a certain level of proficiency in oral skills. It is quite likely that very low proficiency ESL students may not be able to respond effectively, and the answers given are likely to be influenced by the prompts given by the researcher.

The composing aloud procedure is more disturbing. Not only is it highly intrusive, it also contributes to much of the artificiality of the situation. It can be argued that once the subject is made aware of his composing process, the researcher has inevitably altered something which he would have wanted to investigate in the pristine state. He can no longer be sure that he is studying the subject's natural composing process. Furthermore, the subjects need to be highly articulate if this technique is to work. Practice sessions to familiarize the subjects with this procedure are also essential. This technique of gathering data also hinges a lot on what the writers choose to verbalize aloud, and there is no way of checking exactly what he means. In addition, much of what the writers verbalize aloud are often incomplete and ambiguous. As a result, the analysis of the protocols is not so much a glimpse of the writers' cognitive processes at that point in time, but the researcher's personal judgment or interpretation about the writers' meaning. Whatever the methodology, it does not appear that a satisfactory approach could be devised to study the composing process as it is largely cognitive.

Other than the problem of different methodologies, there was no consensus on a valid set of criteria for measuring skill in writing, and thus, no clear agreement on the meaning of unskilled writing. With the exception of Stallard and Zamel, who described their selection procedures and the basis of their designation of their subjects, this piece of vital information was sorely lacking from many of the research studies. Thus, it is quite conceivable that the skilled writers of one study could have been categorized as unskilled writers in another. However, it is likely that language proficiency might be a major component as most assessment of skill in writing would look at the written products, and hence, inevitably, take language proficiency into account.
Another difficulty is that many researchers conceptualized and defined elements of the composing process differently, and these may not correspond with one another. It is difficult to decide if the researchers are referring to the same conception when these terms are bandied around without the benefit of definitions.

The coding used for the types of revisions made also varied across the studies. While Perl's and Pianko's codings were more detailed, Stallard's categories were more quantitative and did not convey much information to the reader. Zamel's and Raimes' criteria for categorizing the different types of revision were not stated.

The types and number of writing episodes also differ across the studies. In addition, the length of time allocated for the writing tasks also varied tremendously. Perl's and Mischel's were as short as 45-50 minutes per session, Stallard's was one afternoon whereas Zamel allocated more than a few days. This could be a serious shortcoming as the length of time taken has been found to affect the quality of the product, and whether the writers revise or not. Another drawback was that the context of the writing task was not tightly controlled, with some studies specifying the intended audience and others leaving it free. The demands of the writing tasks also varied widely in the studies. Some, for instance, set a persuasive task which is generally more difficult than a narrative. Furthermore, the type of writing assigned could have influenced the findings in the amount of enthusiasm generated. For example, school sponsored writing generated very little enthusiasm and commitment to the task whereas one initiated by the writers themselves resulted in a better piece of writing.

All these are very real factors which could have influenced some of the findings.

**Research on the Composing Processes of Young Children**

Various research studies have been designed and carried out to investigate different aspects of children's writing. Many of these have focused on children's development as composers, but these have chronicled the children's development primarily by analysing the products created by the children. Of particular significance, however, to this paper are studies of actual composing behaviours and not a deduction of how children write by examining their products. Accordingly, only research studies which directly explore the composing processes of young children have been singled out for purposes of the review.

Lamme and Childers (1983) carried out a study to investigate young children's composing processes by observing three young children as they composed with a responsive adult in a group setting. The study sought to answer three questions:

1. What are the composing behaviours of the three young children?
2. What behaviours accompany the composing process?
3. What are the differences, if any, in the composing process during personal communication and book writing episodes?

The subjects (two girls, Amy and Lavel and one boy Terry) who all came from middle-class backgrounds, were selected because they possessed verbal abilities that enabled the researcher to study more easily their composing processes. At the onset of the study, Amy was 50 months of age, Terry, 46 months and Lavel, 35 months. Sixteen writing sessions, averaging 48 minutes, were scheduled. These were essentially of two types: those involving personal communication to a direct
audience, and those where the children made books about their experiences. These sessions were videotaped and the writing behaviours then coded. As the study was ethnographic in orientation, participant observation techniques were utilized with the researcher announcing the topic of the day and volunteering to take dictation.

The study revealed that in spite of the fact that the researcher wrote the message that each child dictated, except in the last session when the children wrote their own message; there was a considerable amount of writing. The children wrote scribbles, letters, mock words, and words. All the children moved in their artwork from doing scribbles to drawing representational figures, and in their writing from scribbling, through mock writing, practising alphabet letters, copying letters and words, to writing independently at least a few words. Key elements in this transition included naming letter-like scribbles. The children's development from scribbles to writing words and messages was in no way linear. While they were scribbling, they were at the same time writing words and messages.

Colouring in also took place and seemed to serve a number of functions. Other than making the pictures or words complete or pretty, it seemed to reaffirm the children's developing awareness of print. Both colouring in and tracing over letters was inevitably done from left to right within a word.

The composing processes of the children was also accompanied with oral language. This appeared to enhance their contact with print. The children showed more sophisticated composing in sessions with an immediate audience for personal communication. They also copied words and rewrote their names and words more often, spelled more words and asked for and gave more assistance to each other.

While composing, the children were constantly sharing or reading their composition to each other. The immediate feedback and positive reinforcement from the peers was a great stimulant to further work. The composing process was not divided into three generally delineated phases of prewriting, writing and revising. Rather, in the personal communication episodes they followed a pattern: they dictated, then drew and then shared their completed product.

Kalmer and Kilarr further carried out a study into the writing process of children by moving into classrooms to work alongside teachers and collect writing process data. Two classrooms, kindergarten and Grade 4, were their focus for finding out what children do when they write. Direct observation of the process during composing and writing conferences were carried out.

One of the subjects, Coline, who was 4½ years old, was comparable in age to the three subjects studied by Lamme and Childers. Like the children who used mock letters in their writing, Coline also used letters or words which were her personal inventions. Her writing process was also increasingly accompanied by oral language. When her composing was done, she would read the message aloud, using her finger to match her personal inventions to her spoken message.

Oral language appears to be an important component of the composing process of young children and this has been investigated by Dyson (1983). Participant observation was used to gather data and to gain some insight into the children's perception of writing and their reasoning about writing behaviours. For this purpose, a writing centre was set up by the researcher, and the students were asked simply to write, according to their own definition of writing. The data collecting consisted of audiotaped recordings of the children's talk at the centre, observational notes, the written products and interviews with the children and their parents.
The findings revealed that the conventional writing process of beginning writers can be depicted as involving three recursive and overlapping components, that is, message formulation, message encoding and mechanical formation. In other words, this means that the child has a message and uses some strategy for encoding that message and actually forms letters. This behaviour was exhibited by the children of the other studies.

The children's self directed language also served as a bridge from the oral to the written 'name' or 'labels'. Furthermore, they also exhibited a one to one correspondence between the graphics and their oral messages. Oral language appears to be an important part of the early writing process, serving to provide meaning, and for some children, the systematic means for getting that meaning on paper. Like the children of the other studies, oral language was a tool for seeking needed information, evaluating their products and assisting themselves in encoding and decoding. It was also used to elaborate on the full meaning of products to audiences.

Much remains to be done in the field of the composing processes of young children. Unlike those findings already established for the older writers, those of young children appear to be largely exploratory. The problem of investigating the composing processes of young children is compounded by the fact that the writing behaviours may not be stable over time as their writing abilities develop. Thus, studies of a longitudinal nature are necessary to fill in the existing gaps in this field. However, the most striking difference between the older writers and young children is the spontaneity and enthusiasm which the latter bring to the writing task. Furthermore, feedback and evaluation by peers are natural features of their writing behaviour.

The Implications for the Teaching of Writing

Despite the limitations of these studies, it must be acknowledged that they have broken new ground in a territory which had hitherto been unexplored, and have shed some light on the mystery surrounding the process of composing.

Contrary to the traditional paradigm of writing, the view of composing which has emerged from the research studies is that writing is a process or journey of discovery of meaning. A writer may start on his writing task with only a vague notion of what he intends to write about; in the process of committing his thoughts on paper, ideas are generated, clarified and polished. Revision is thus an essential step in this process of discovering and creating meaning.

This view of composing has called into question the relevance of traditional writing practices which require students to produce a detailed outline or plan prior to writing, which teach revision as an editing and not a generative tool and which force students to fit their writing into a set of organizational moulds drawn up. Furthermore, these approaches have focused on form and accuracy to the detriment of content and the writer's intention. What the writer is trying to say is forgotten as the teacher scores the paper in red, circling each error that he comes across. It is not surprising that such practices do not aid the students to become better writers, instead they might well be a disservice as demands of the writing task appear overwhelming, so much so that the students are defeated even before they got started. The student is forced to know beforehand what his product would be like when he has no idea of what would come next. Thus, some students might well write an outline after their writing task so as to satisfy their teachers.
It a process oriented approach to writing is to be practised, students should be encouraged to put their ideas down on paper and worry about accuracy later. For students who are unable to get started on the writing task, a series of invention strategies could be made available to them, such as, quick writing, brainstorming, associational diagramming, or discussions with peers or the teacher. However, it must be made clear to the students that these are just activities which may help to generate ideas, and need not necessarily be practised zealously as the 'biblical principles' of writing.

It is highly likely that the traditional focus on form would lead students to think that a competent writer is one who inevitably and effortlessly conveys his message accurately the first time round without any need for revision, and that an unskilled writer is one who struggles to find the right word and constantly revises. They may have the misconception that good writers know exactly what they are going to say before they say it. It is thus necessary to dispel this myth and reassure students that false starts and revisions are common.

To allow the students to discover for themselves that the process of composing is one of discovering meaning, sufficient time should be given for the writing task. Students should be allowed opportunities to write and rewrite, and in the process discover that several drafts may be necessary before one which closely resembles their intentions is produced. However, this should not be rigidly practised without examining whether the product warrants further changes or whether the author of the piece is inclined to revise further. Students should be taught to 'distance' themselves from their writing by allowing a certain lapse of time before they approach it again.

In line with this, rewriting and revising should be looked upon as integral to the process of composing and not as indications of their feeble attempts at writing. Strategies for revision should also be given as a guide to enable students to become better evaluators of their writing. The priorities of revision should also be made clear, that is, changes in meaning and focus at the paragraph or whole draft level should take precedence over surface level changes. In addition, teacher-student conferences between drafts should be held regularly so that students can identify which areas need working on and improve those.

In order to fully understand the writing process, the students should also become intricately involved in that process. They should shoulder the responsibility for their writing and this can be facilitated by allowing them freedom in their choice of topics, and responding to them as partners in the writing process, and not as evaluators who would cursorily grade them a 'C' for all their painful efforts. Most of the research studies indicated that school-sponsored writing generated little interest with the result that the quality of the writing suffered. By allowing students to partake actively in the type of writing that they are to do, many of these problems can be avoided or minimised. Topics should thus be motivated by the students' interest, personal feelings or experiences. To a beginning writer, nothing is more horrendous than to have to write in a vacuum, without any personal knowledge or experience to anchor his writing.

Peer and teacher feedback between drafts should also be a regular feature of the writing class so that students have opportunities to share their writing with each other as well as for an audience other than the teacher. In the process, the students may come to realize that audience considerations need to be taken into account. Furthermore, it also instills greater awareness on their part that their writing should be more reader-based as what appears perfectly clear to them may well be very obscure to their peers or the teacher.

However, when it comes to the crux, nothing is more effective than a teacher who writes and shares his writing experiences with the class. Involvement in the writing process should not be confined to
the students alone; the teacher should also be an active participant in the process itself. He thus provides a model which is real to the students. He may rue the day that he decided to become a writer as he agonizes over every bit of his writing, but his attempts at sharing his writing with the class would inevitably enrich their writing and evaluating experiences.

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