DOCUMENT RESUME

ED 363 132 FL 021 611

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TITLE Inventing Writing: How ESL Writers Use Commonly Taught Prewriting Techniques.
PUB DATE Apr 93
NOTE 25p.; Paper presented at the Annual Meeting of the Teachers of English to Speakers of Other Languages (27th, Atlanta, GA, April 13-17, 1993).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS College Bound Students; Developmental Studies Programs; *English (Second Language); Higher Education; *Prewriting; Second Language Learning; *Writing Instruction; *Writing Skills; *Writing Strategies

ABSTRACT

A study examined use of prewriting techniques among 11 students of English as a Second Language (ESL), of varying language backgrounds, enrolled in a pre-freshman composition class. It investigated use of both prewriting strategies and invention techniques taught in class, looking at: (1) whether they would be used when not specifically required; (2) the relationship between the way a heuristic was taught and the way it was used; (3) variety and frequency of use; (4) relationship between native-language (L1) writing experience, second-language (L2) proficiency, and use of various techniques; and (5) how content generated by invention writing was incorporated into a draft. Data were gathered from students' pre-draft writing and first drafts of a total of 22 essays. Results indicate that ESL writers use various invention techniques productively, and that these were apparently unrelated to L1 writing experience or high L2 proficiency. However, L1 experience and L2 proficiency may have limited impact on specific use of the techniques. Subjects clearly preferred techniques that lend themselves to approximating and translating the inner dialogue of the composing process, and it appeared they instinctively adapted invention techniques to conform to the psychological reality of the composing process when the technique, as taught, varied from this. Pedagogical implications are examined. (MSE)

ED 363 132

TESOL '93: ATLANTA, GEORGIA

INVENTING WRITING: HOW ESL WRITERS USE COMMONLY TAUGHT PREWRITING TECHNIQUES

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With the shift to the process approach to teaching writing, increasing attention has been focused on what students do before writing a draft, on the discovery of what to say - often called invention writing. Invention has a long and august history in rhetoric having been emphasized by both Greek and Roman rhetoricians. However, by the turn of the century, the teaching of invention had generally fallen out of favor and so remained until the mid-1960's when voices such as Rohman (1965), Harrington (1968), and Macrorie (1968) began urging that students be encouraged to use various methods to explore a topic prior to writing a draft. Rohman (1965, p. 106) called this "Pre-writing" or the stage of discovery and suggested making use of meditation, journals, and analogies, while Macrorie recommended the use of freewriting. In 1970, Young, Becker and Pike published an important rhetoric text, Rhetoric: discovery and change in which they presented a formal discovery heuristic based on the use of questions to view a topic from three different perspectives: in isolation, as something which changes over time, and as having an interdependent context. During the 1970's, the use of these and other similar techniques to assist students in the discovery of what to say became more and more widespread in teaching writing to native speakers. However, ESL writing pedagogy continued for the most part to focus on form and product, and it was not until Spack's article in 1984 that a discussion of invention writing

first appeared in ESL literature. Today, the use of invention writing has become firmly established in ESL instruction.

The use of these techniques is generally emphasized as a stage of writing which occurs before the writing of an initial draft (although most texts point out that they can be used at other points in the writing process). However, the terminology used in the literature to refer to this stage and these techniques is hardly unanimous. One encounters prewriting (Odell, 1974; Lindemann, 1982; Spack, 1984; Dennet, 1990; Pope and Prater, 1990), written prefiguring (Selfe, 1984), discovery (Rohman, 1965; Harrington, 1968), and, of course, invention writing (Spack, 1984; Pope and Prater, 1990). The term "pre-writing" is particularly confusing since several researchers (Pianko, 1979; Perl, 1979; Raimes, 1987) have used this term to refer specifically to only those mental processes which occur just prior to the first word being written. I will use the term "prewriting" in a way that is coterminous with what Selfe (1984) refers to as "predrafting"; that is, what occurs from the time a writer receives an assignment to the writing of a draft for review. This encompasses the starts, stops, and changes both mental and written, not meant for public view. This, of course, includes invention writing, by which I mean the various heuristic techniques specifically taught to assist a writer explore a topic. Among the most commonly taught are brainstorming, freewriting, clustering/grouping, cubing, and the use of questions.

My interest in invention writing is essentially descriptive. I wanted to determine in what ways, if at all, ESL writers incorporate these various techniques into their own writing processes. Although it is clear from the literature that a rich and complex inner dialogue accompanies writing of both native and non-native speakers, it is less clear to what extent the ESL writers studied actually used invention/prewriting when not specifically asked to do so as part of their coursework. Spack (1984) presents a case study of one student who made extensive use different invention techniques, but apparently did so as a course requirement. Dennet (1990) does report that several of her ESL writers made use of prewriting in a non-course setting; however, she does not specify which, if any, of these techniques they used. Raimes (1987), on the other hand, reports her subjects using planning and rehearsing strategies; however, none seemed to use any of the commonly taught invention techniques, with only three making rough outlines (p. 453).

The purpose of this study, then, was to determine

1. if any of these techniques would be employed when not specifically required;
2. the relationship between the way a heuristic was taught and the way it was used;
3. the variety and frequency of use;
4. if there was a relationship between L1 writing experience or L2 proficiency and the use of various techniques.
5. how content generated by invention writing was incorporated into a draft;

I'll discuss the first four points, and then, if time permits, discuss point four.

METHOD

Subjects

The 11 students participating in this study were what are often called "unskilled" writers (Raimes, 1985, Brook, 1985). That is, they were placed in one of the two advanced ESL pre-freshman composition writing classes offered by our program. Placement was not based on a writing sample. For new students, it was based on the University of Michigan's English Placement Test (not to be confused with the Michigan Test of English Language Proficiency) and an oral interview; for those continuing, the basis was having successfully passed the previous level writing course. The native language of 8 was Japanese; those of the other three were German, French, and Thai. Their ages ranged from 19 to 45. Four were university graduates, five had had one or more years post-secondary education, and two had only completed high school. None had been in the U.S. for over 8 months. Six of these students had had extensive L1 writing experience (L1E). They had had to produce frequent writing in their first languages, either in school or for work; three had done essay writing, the other three had not specifically written essays but had often done writing such as technical reports, client evaluations, or various types of business correspondence. The remaining five had had more limited L1 writing experience (L1L). Although they had done writing in L1, it had been done much less frequently, and their experience had been limited to short paragraphs, sentences, and/or book reports. Additionally, six of the students had received some previous instruction in the use of brainstorming and outlining in a previous course. As a measure of proficiency, the institutional TOEFL was administered at

the end of the 10-week instructional session. Their scores ranged from 437 to 543 (see Table 1). add ?.

Procedure

Most writing in the academy is done within the context of course work. In order to have a "real-world" sample, I chose to integrate this research as unobtrusively as possible into the normal flow of a course. Thus, the writing obtained for this study consisted of essays written in response to actual assignments within the context of ordinary school life and pressures. However, I also realize, as Silva (1989) has pointed out, that this may mean that my results are biased and caution you to bear this in mind.

Students were given initial instruction in the use of freewriting, looping, brainstorming/listing, grouping and clustering, questions, and cubing, which included doing short pieces of writing based on ideas generated by each technique. Looping was taught as an aspect of freewriting and grouping and clustering were taught in connection with brainstorming. For their first essay, they were required to use any two techniques, i.e. freewriting and/or looping, brainstorming/listing, clustering/grouping, questions, and cubing. For their second and third essays, which provide the data for this study, there was no specific requirement to use invention writing, although sufficient class time was allotted for prewriting.

As these classes were very small, I was able to develop a close rapport with my students. I explained that I was doing a research project and would appreciate being given all pre-draft writing, if any. I made sure that they understood this was both ungraded and voluntary. I also explained that there was no

requirement to use any of the invention techniques, nor any need to make their notes and writing "pretty". All students chose to participate.

Students turned in their prewriting along with their first drafts. At this point, I had a conference with them to discuss their drafts and informally questioned them about their pre-writing. Among other things, I asked students to identify the type of invention techniques which they thought they had used and to put their prewriting notes into chronological sequence for me.

My final sample consisted of 22 essays written by 11 students.

RESULTS and DISCUSSION

All subjects did use some form of prewriting and the majority, seven for the first essay and eight for the second essay, used more than one identifiable type of invention writing. Although the number of words produced in prewriting ranged from 36 to 1288, both groups tended to do a significant amount of prewriting. For the first essay, the L1 extensive group (L1E) produced more prewriting than the L1 limited (L1L) group, an average of 672 words as opposed to 623. For the second essay, the L1E group produced 597 words, slightly fewer words than 606 of the L1L group. Both groups produced more words of prewriting for essay 1 than they did for their drafts, whereas for essay 2, the number of words in the drafts exceeded the prewriting. The amount of prewriting, then, does not seem particularly related to L1 writing experience. Moreover, the number of words written does not seem to be a function of having a high L2 proficiency. The two students with the highest TOEFL scores produced a mean of 381 words of prewriting and 519 words of draft for essay one and 111 words of prewriting and

376 words of draft for essay 2. In contrast, the three students with lowest TOEFL scores produced means of 570 words of prewriting and 539 words of draft for essay one and 587 words of prewriting and 666 words of draft for essay 2 (see Table 2).

In addition to using a variety of techniques, these writers often used the same type of invention writing in clearly separable instances; for example, a student would freewrite, then brainstorm, then freewrite again (see Table 3). While there was a clear correspondence between the types of invention writing taught and the various invention techniques employed, actual usage revealed significant adaptation. I will discuss each technique briefly:

Freewriting

The freewriting and looping techniques taught to and practiced by my students essentially followed the instructions in their texts i.e., to write as much as the could in connected sentences, to write as quickly as they could without stopping to think about grammar or spelling, to use their native language if stuck and to write squiggles or something like "I'm stuck, I'm stuck" if ideas dried up. They then practiced looping, in which they were asked to write one sentence which expressed the most about the ideas in the previous freewriting and then to freewrite again, using this as the first sentence. This process was repeated again.

My subjects identified as freewriting any prewriting consisting of strings of sentences. This freewriting showed no instances of looping or of being interrupted with phrases like "I'm stuck". It also showed none of the starts, stops, and hesitations which talk-aloud protocols reveal as common for writers when

rehearsing and planning. Nor, in fact, did any of it seem to conform to my own understanding of freewriting as a "form of free association or stream-of-conciousness self-expression [in which] one idea leads to another, which leads to another, like links in a chain." (Flower, 1981, p.73)

Brainstorming/Listing
Clustering/Grouping

Although brainstorming and listing are sometimes differentiated (Pope and Prater, 1990), both techniques have similar characteristics and in this study refer to the same heuristic. Students were asked to make rapid lists of ideas, using single words or phrases which came to mind about a particular subject. They then practiced organizing, and adding to, these lists through the technique of grouping, that is, sorting related ideas into groups and determining a category-word for the group, or through the technique of clustering, a kind of conceptual mapping in which the topic is written down in the middle of a piece of paper and lines drawn from it to other nodes representing subpoints and details, which may themselves be connected by other lines. As these techniques also have very similar characteristics, I have considered them together.

Brainstorming/listing seemed to be used much in the manner it had been taught - and I'm not sure it could be used other than in this way. However, in only a few instances was either clustering or grouping used to organize ideas from a <u>previously</u> generated brainstorm list. The students who used clustering mostly used it to directly generate topic points, subpoints, and details. This, of course, corresponds to a another common way in which clustering is

presented in other texts, but not to the one these writers practiced in class or, according to them, had learned anywhere else. Grouping was used in a similar fashion. Students wrote down a list of important subpoints and then generated a list of associated ideas for each subpoint. Grouping in particular seemed to be used to translate into writing a mentally preformed set of subpoints and to directly generate ideas about them rather than to be a way of discovering or exploring possible organizations of ideas previously generated.

Questions

When practicing the use of questions in class, students used a variation of the questions developed by Young, Becker, and Pike (1970) which required them to view their topics in isolation, as something changing over time, and as having an interdependent context. They practiced developing questions for all three of these perspectives. Their prewriting material reveals some use of questions, but there was only one instance in which a topic was viewed from all three perspectives. In other instances, what was employed was a non-systematic use of various information questions. In addition to the use of questions as a separate heuristic, questions which may or may not have been answered often appeared in the freewriting of these subjects.

Outlining

Outlining was not specifically taught or practiced, but several students used it both to organize material and to help generate ideas.

FREQUENCY of USE

There was variation in frequency and use of the various heuristics (see Table 3). For essay 1, both groups did similar amounts of outlining and questioning. The L1L group did more freewriting, while the L1E group did more brainstorming/listing and clustering/grouping. For essay 2, the frequency of use of freewriting, brainstorming/listing, questions, and outlining dropped for the L1E group in comparison both to their use of these techniques for essay 1 and to their use in essay 2 by the L1L group. Previous instruction (PI) did not seem to increase the use of brainstorming/listing which was used equally often by those who had and had not had it. However, it did clearly have a relationship to the use of outlining, which had a mean use of 1.8 by those having had previous instruction as opposed to a mean use of 0.2 by those having no previous instruction (NPI) (see Table 6).

The most salient difference between the groups was the use of clustering/grouping, which was used far more frequently by the L1E group. It is worth noting that 4 of the 6 L1E group had also received no previous outlining instruction, while 4 of the 5 L1L group had received previous instruction, and, indeed, the NPI group used clustering/grouping more frequently than did the PI group. Organizing, planning, and creating interrelated heirachical relationships are common features of the writing process. My data suggest that students who are familiar with outlining will often choose it as a means of accomplishing this. However, students who have not received specific instruction in formal outlining tend to choose clustering and grouping, techniques which incorporate an aspect of organizing.

The use of clustering/grouping may also have a relationship to language proficiency. The two writers with the highest TOEFL scores used these techniques almost exclusively, whereas the students with the lowest TOEFL scores, who also had limited L1 writing experience, used freewriting the most and clustering/grouping the least (see Table 4). Although my sample is too small to support strong generalizations, it does suggest that higher L2 proficiency experienced writers may be more able to utilize composing strategies which involve more mental rehearsing than those not so proficient. Writing in L2 obviously involves a component of learning to use L2, and a lower proficiency writer will certainly have more extensive L2 processing demands in addition to whatever demands composing itself presents. Thus, for lower proficiency students, the dual demands of L2 processing and mental composing and organizing may well overload short-term memory, resulting in their writing out thoughts, that is, rehearsing in writing, to reduce this overload. Nonetheless, the use of invention writing in general does not seem to be linked to language proficiency since writers with a proficiency which is relatively low but sufficient to understand an explanation of the techniques do indeed use invention and, as mentioned above, produced as much prewriting as those students with much higher proficiencies.

My data allow some limited comparisons with Pope and Prater's (1990) study of the prewriting/invention strategies used by 11th grade writers. Overall, for both groups, freewriting was ranked more highly than either brainstorming, listing, or clustering. Pope and Prater's group ranked looping and cubing lowest, 7th and 8th

out of 8 (p. 67). Similarly, although they had been learned and practiced, they were not used at all by my group (see Table 5).

In considering why looping and cubing were so little used, it may be useful to consider them within the context of the psychological reality of the composing process. As previously mentioned, the actual use of freewriting, clustering/grouping, and questions varied from the way they were taught. This suggests that writers transform these techniques to better fit the mental realities of their composing processes. Kinney has made a distinction between "rationalist" and "intuitive" techniques (1979, p.353-354). Rationalist techniques include problem solving techniques, systematic question lists, and, I would suggest, cubing, which is really a variation on the classical topics included by Kinney as rationalist. Intuitive techniques include brainstorming, free association lists, and freewriting. I would also include clustering/grouping since they are so clearly related to free association lists and brainstorming. Kinney argued that intuitive heuristics are right-brain processes, while rationalist ones are left-brain (pp 354-355). This may or may not have empirical validity, but it is the case that the writers in this study clearly favored the use of intuitive techniques. The lack of use of cubing and the infrequent use of systematic questions is consistent with this predilection.

Talk-aloud protocols, as well as my own data, show that writers do ask questions as they compose, that is, that some form of questioning is part of the psychological reality of the composing process, which would explain the use by these writers of information type questions as well as their use in freewriting

(Flower, 1981; Brooks, 1985; Raimes, 1987; Carey and Flower, 1989). With respect to looping, I would argue that, although used in conjunction with freewriting, it is not an "psychologically real" technique. None of the talk-aloud protocols I have looked at reveal writers rereading what they've written and summarizing it into one sentence. It seems to be a much more structured, "rationalist" kind of intervention and, I would suggest, is why it is not readily used. Thus, these writers chose to use invention strategies which other studies have shown to be instinctively used as part of the composing process. I do not mean to suggest that these strategies necessarily duplicate or directly correspond to mental events od the composing process; however, I do propose that these techniques lend themselves to a closer approximation of the process. Their use, then, facilitates the transcription of the internal images and dialogue which are part of this process, and, thus, these techniques have a greater psychological reality, which I would argue is why they are "intuitive".

Not only did these writers choose invention techniques which were intuitive, but they readily transformed these techniques so that their use was more in conformity to the psychological reality of the composing process. With respect to freewriting, the fact that my data showed no instances of hesitations or interruptions suggests that while writing without stopping may be a useful classroom activity to decrease fixation on surface form, it was not used in actual composing because it did not conform to the psychological reality of composing for these students. Researchers have repeatedly stressed the recursive nature of composing, a writer continually, not in discrete stages, rehearses, reviews, and

translates ideas into writing (Flower and Hayes, 1980, Perl, 1979; Raimes, 1987). To write without pausing or rescanning short-circuits this process. In fact, one of my students specifically told me that she didn't use freewriting because she thought it was unnatural not to pause and to have to write squiggles or to write "I have nothing to say..." The unity of theme and the lack of interruptions found in what my subjects have identified as freewriting make it extremely unlikely that these writers did not pause and review while using this technique. In other words, these writers seem to have adapted freewriting so that it is in closer conformity to their composing processes.

In the same way, the actual use of grouping/clustering, as mentioned above, also revealed adaptations which again support the argument that these writers have instinctively adapted invention techniques to conform to the psychological reality of their composing processes.

CONCLUSIONS

My data show that

1. ESL writers productively use various invention techniques. In general, this use does not seem linked to either L1 writing experience or to a high L2 proficiency.
2. However, L1 writing experience and/or L2 proficiency may have limited impact on the specific use of these techniques. Students with extensive L1 writing experience and high L2 proficiencies may choose to do more mental rehearsing than those with lower proficiencies and less writing experience.

3. These writers clearly prefer to use techniques which lend themselves to approximating and translating the inner dialogue of the composing process.
4. In addition, writers instinctively adapt invention techniques to conform to the psychological reality of the composing process when the technique as taught varies from this.

Pedagogical Implications

This study suggests that we need to reconsider which invention techniques we teach and how we teach them. Spack has pointed out that students can and will devise their own strategies (1984, p. 657). Indeed, research should now focus on what strategies and adaptations students do devise. There seem to be patterns in the ways students use and modify invention strategies in order to make them their own. Thus, we should begin to teach invention techniques in a way that conforms to this psychological reality. Specifically, I would suggest

1. not teaching techniques like looping and cubing which are in reality infrequently used;
2. instead, spend more time teaching and practicing those techniques which are frequently used in ways which conform to their actual use:
    a. have students practice using clustering/grouping to directly generate ideas as well as to organize previously generated lists;
    b. use traditional freewriting exercises in class to help loosen fixation on mechanics and form. In addition, make sure that students understand that

this can be an effective technique to overcome "writer's block". Then teach a modified version in which pausing and reviewing are permitted. Encourage students to write down, rather than mentally rehearse, alternate phrases and fragments. In other words, have them translate into writing their inner voice. As with traditional freewriting, emphasize that concern with grammar, etc. is not important. However, allow pausing and reviewing. If a student is stuck, encourage him/her to make some kind of notation such as a circle with a ? and to continue writing, coming back to the problem spot later. Students should clearly understand that this is a first pass. What is desirable is not perfection, but something which is adequate. Flower terms this process "satisficing" (1981, p. 39). Again, students should, as they write, mark ideas that only satisfice and return to theses for further development and revision later. Also, encourage writing down of questions about various aspects of the topic as they freewrite. These may or may not prove useful to answer later.

I want to emphasize that these are suggestions. You yourselves can easily do a bit of classroom research to find out how appropriate these are and modify them as necessary. However, I do strongly feel that whatever invention techniques we do teach should be ones which facilitate composing by mirroring as much as possible the actual composing process.

Table 1
Subject Characteristics

Name	L1	L1 writing experience*	Previous L2 invention	TOEFL Score	Education***
Nicole	French	EL	No	543	U
Hiroki	Japanese	E	No	530	U
Takako	Japanese	E	No	487	U
Rieko	Japanese	E	Yes	476	PS
Chikako	Japanese	EL	Yes	457	U
Beatrice	German	EL	No	?**	PS
Surasuk	Thai	L	Yes	490	HS
Kazuko	Japanese	L	Yes	443	PS
Naoka	Japanese	L	Yes	443	PS
Kumiko	Japanese	L	Yes	480	HS
Marimi	Japanese	L	No	437	PS

* EL = extensive L1 writing, including essays
  E = extensive L1 writing other than essays
  L = limited l1 writing experience

** Student was unable to complete her TOEFL

*** U = graduate of four-year university
    PS = one or more years post-secondary education
    HS = high school

Table 2
Mean Number of Words Written: Prewriting and Drafts

	PREWRITING		DRAFT	
	1	2	1	2
L1E (N=6)	672	597	650	653
L1L (N=5)	623	606	527	653
500> (N=2)	381	111	519	376
450-499 (N=5)	768	720	661	674
<450 (N=3)	570	587	539	666

Table 3
Mean Occurrence of Various Types of Invention Writing:
Relation to Writing Experience

	Freewriting		Brainstorming/ Listing		Clustering/ Grouping		Questions		Outlining	
	1	2	1	2	1	2	1	2	1	2
L1E	1.2	0.8	0.7	0.3	1.3	0.8	0.3	0	0.7	0.3
L1L	1.4	1.6	0.4	0.6	0.2	0.2	0.2	0.4	0.6	0.6

Table 4
Mean Combined Total Occurrence of Various Types of Invention: Relation to Proficiency Levels

	Freewriting	Brainstorming/ Listing	Clustering/ Grouping	Questions	Outlining
500> TOEFL	0	0.5	3.0	0	0
450-499 TOEFL	3.0	0.6	1.8	1.0	1.8
<450 TOEFL	3.3	1.3	0.3	0	1.0

Table 5
Ranked Preferences for Invention Techniques

Ranking	L1L	L1E	<450 TOEFL	450-499 TOEFL	500> TOEFL	Total
1	Freewriting	Clustering/ Grouping	Freewriting	Freewriting	Clustering/ Grouping	Freewriting
2	Outlining	Freewriting	Brainstorm/ Listing	Clustering/ Grouping	Brainstorm/ Listing	Clustering/ Grouping
3	Brainstorm/ Listing	Brainstorm/ Listing Outlining	Outlining	Questions	**	Brainstorm/ Listing
4	Questions	Questions	Clustering/ Grouping	Brainstorm/ Listing	**	Outlining
5	Clustering/ Grouping	**	**	**	**	Questions

Use of questions was not systematic. Looping and cubing, although taught and practiced, were not used in actual prewriting.

REFERENCES

Brooks, E. (1985). Case studies of "unskilled" college writers: An hypothesis about stages of development. (ERIC Document Reproduction Service ED 289 340).

Carey, L.J. and Flower, L. (1989). Foundations for creativity in the writing process: Rhetorical representations of ill-defined problems. (ERIC Document Reproduction Service ED 313 699).

Dennett, J.T. (1990). ESL technical writing: Process and rhetorical differences. (ERIC Document Reproduction Service ED 322 713).

Flower, L. (1981). Problem solving strategies for writers. New York: Harcourt Brace Jovanovich

Flower, L. and Hayes, J. R. (1981). A cognitive process theory of writing. College Composition and Communication, 32, 365-387

Harrington, D.V. (1968). Teaching students the art of discovery. College Composition and Communication, 19, 7-14.

Kinney, J. (1979). Classifying heuristics. College Composition and Communication, 30, 351-355.

Lindemann, E. (1982). A rhetoric for writing teachers. New York: Oxford University Press.

Macrorie, K. (1968). Writing to be read. Rochelle Park, New Jersey: Hayden Book Company, Inc.

Odell, L. (1974). Measuring the effects of instruction on pre-writing. Research in the Teaching of English, 8, 228-240.

Perl, S. (1979). The composing process of unskilled college writers. Research in the Teaching of English, 13, 317-336.

Pianko, S. (1979). A description of the composing process of college freshman writers. Research in the Teaching of English, 13, 5-22.

Pope, C. and Prater, D.C. (1990). Writing proficiency and student use of prewriting invention strategies. Reading Research and Instruction, 29, 64-70.

Raimes, A. (1987). Language proficiency , writing ability, and composing strategies: A study of ESL college student writers. Language Learning, 37, 439-468.

Rohman, D.G. (1965). Pre-writing: The stage of discovery in the writing process. College Composition and Communication, 16, 106-112.

Selfe, C. (1984). The predrafting processes of four high- and four low-apprehensive writers. Research in the Teaching of English, 18, 45-65.

Silva, T. (1989). A critical review of ESL composing process research. (ERIC Document Reproduction Service ED 305 820).

Spack, R. (1984). Invention strategies and the ESL composition student. TESOL Quarterly, 18, 649-669.

Young, R.E., Becker, A.L., and Pike, K.L. (1970). Rhetoric: Discovery and change. New York: Harcourt Brace Jovanovich.