TRACKING ESSAY WRITING STRATEGIES OF UNIVERSITY STUDENTS WRITING ACADEMIC ASSIGNMENTS IN ENGLISH AS AN L2

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1. Introduction

This paper focuses on the relationship between planning and revising by advanced L2 writers preparing an extended written academic assignment in English.

Five visiting students taking undergraduate units in modern languages agreed to take part in the study. They were asked to select a written assignment they had been set for one of their non-language units and to save periodic copies of their 'work in progress' while writing the assignment. The resulting files provide a series of snapshots that allow us to investigate the development of each student's assignment at various stages from earliest drafts to finished essay.

2. The writing process

There is a tradition in composition that views the composing process as a series of decisions and choices that the writer makes. At its simplest, the process is seen as a linear one involving four stages: Prewriting – Composing – Revising – Editing (Tribble, 1996: 38).

The first stage, Prewriting, involves specifying the task, planning and outlining, collecting data, and making notes. Next, Composing comprises producing the text according to the plan. Then Revising consists of reorganizing, shifting emphasis, focusing information and style for the readership. Finally, Editing involves checking grammar, lexis and surface features, for example punctuation, spelling, layout, quotation conventions, and references.

This view has been shown to be problematic, however, as activities associated with prewriting do not always occur at the start of the overall writing process and revising and editing don't always come at the end.

Emig's (1971) study on 'The composing processes of twelfth graders' was one of the first to reveal the complex, non-linear nature of the composing process. She found that writing involved a continuing attempt to discover what it is one wanted to say. While writing, her students seemed to reveal a number of behaviours, all of which indicated the nonlinear nature of writing. Perl (1980), also, claimed that the act of writing is not a straightforward and linear sequence. The Flower & Hayes (1981) model of cognitive writing processes attempted to deal with this by suggesting that, rather than being a linear set of decisions, the writing process is recursive and goal directed.

1. The process of writing is best understood as a set of distinctive thinking processes which writers orchestrate or organize during the act of composing.
2. These processes have a hierarchical, highly embedded organization in which any given process can be embedded within any other.
3. The act of composing itself is a goal-directed thinking process, guided by the writer's own growing network of goals.
4. Writers create their own goals in two key ways: by generating both high-level goals and supporting sub-goals which embody the writer's developing sense of purpose, and then, at times, by changing major goals or even establishing entirely new ones based on what has been learned in the act of writing.
   Flower & Hayes (1981: 366)

Since the early 1980s there have been a growing number of studies of the writing process in both L1 and L2 writers. Many of these have chosen to focus on particular subprocesses. Levy & Ransdell (1996), for example, discuss writers in terms of the pattern and relative proportions of planning, writing, and revising in their compositions. Zimmermann (2000), for example, concentrates on the tentative forms the writer produces as part of the subprocess of actually formulating or composing the expression they want in the target language. Manchón, Roca de Larios, and Murphy (2000) investigated what they called backtracking – how often and to what purpose three second language writers reviewed the text that they had already written. Their subjects used the Already Written Text (AWT) in different ways: one backtracked very little and produced new text with very little reference to what had already been written, a second used the AWT to check what had already been said and decide where to go next, and the third referred to the AWT in order to see how the plan was developing and to make sure the new text contributed to the goals.

There have also been a considerable number of studies over the past 25 years that have investigated the revisions writers' make to their texts. These have tended to focus on particular aspects of revision in the writing process and have investigated the type, frequency and pattern of revisions in particular settings. A majority of recent L2 revision studies have taken place:

- In instructed settings, e.g. looking at peer or teacher feedback (e.g. Cumming & So, 1996; Berg, 1999; Min, 2006).
- With relatively low L2 proficiency (or younger) learners (e.g. Stevenson, Schoonen & de Glopper, 2006; van den Bergh, Rijlaarsdam & Breetvelt, 1993).
- With short, specially written texts, or in a special session — for example using a particular key tracking program (e.g. Hall, 1990; Van Waes & Schellens, 2003; Kobayashi & Rinnert, 2001; Lindgren & Sullivan, 2002; Archibald, 2010).

Hall's (1990) study, for example, investigated second language writers carrying out similar short tasks over a series of writing sessions in order to discover whether revisions were made while composing, or between drafts. He also wanted to establish whether the revisions made by writers in their second language were any different from revisions made by writers in their first language.

A majority of these studies have used short pieces of writing that were produced specifically for the study in question. These were often also chosen for their familiarity – the students had dealt with similar pieces on many occasions. The major disadvantage of using such a short, familiar task is that the writers often appear to have an established procedure for dealing with such pieces of writing. The writers are able to fix a plan at the start and see it through with few revisions.

While this type of task may be useful for the type of writing students often do in language classes, it is quite different from the more extended pieces of writing they are expected to produce for the units and modules they take at university in the UK. For a typical student at a British university, essays are produced over a period of days or weeks with usually little or no guidance or help.

Most student writing in UK universities takes place over extended periods and away from writing support centres. Although support is usually available to international (and sometimes home) students, most in-sessional writing support takes the form of commenting on already written essays, or short sections taken from them. It also tends to focus on proofreading or editing

already completed texts and commenting on the content and direction of the essays after they have been completed.

3. THE CURRENT STUDY

This study investigates advanced L2 writers composing an extended academic assignment in English. It seeks to investigate whether there is any evidence that revision under these circumstances is part of a recursive writing process or a latter stage of a linear one.

The study seeks to answer the following four questions:

1. Where do revisions occur in the drafting process?
2. Are linguistic and content revisions distributed equally across different drafts of a text in development?
3. At what point in the writing process are students likely to make changes to the content of what they are writing?
4. What is the distribution of linguistic changes from draft to draft?

The study samples the writers' texts at intervals and is thus a 'between drafts' study – it does not track changes made by the writer that are then changed again before the draft is saved.

The key point of this study is that it seeks to relate revising to the overall process of producing a planned, extended text. The data is naturalistic, not contrived and any intrusion of the research into the writing process has been kept as small as possible. The subjects have written their assignments, as far as possible, in the way they normally would.

3.1. *Revisions*

The study takes a broad view of revision as changes made to the language or content of the already written text. It includes text corrections and transformations (Allal, 2004; Rijlaarsdam, Couzijn & van den Bergh, 2004) as well as more substantive goal-directed rewrites. The study also assumes that there is a difference between a writer revising existing text and formulating, or composing new text in accordance with their overall goal, or plan. Additions to the text are therefore counted as revisions only when they are a) local and integrated into the structure of the already written text, or b) where the starting point for the addition is a change to a portion of the already written text. The addition of new text, which extends or develops ideas, or adds to the substantive development of the text is seen as formulating, or composing.

Revisions were categorized according to the four broad categories of surface changes and changes to the text base in Faigley and Witte's (1981) taxonomy. This allowed the analysis of changes to the text in terms of both linguistic and conceptual dimensions (Hall, 1990).

FIGURE 1: Revision categories used in the study
(adapted from Faigley & Witte (1981: 403)).
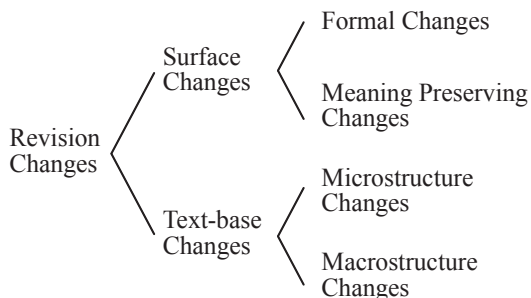
The surface changes are oriented towards the language of the text at two levels: formal changes to spelling, grammar, etc. – often seen as corrections and changes to the language used to say something, without substantially changing the meaning of what was said.

The text-base changes are oriented towards the content of the text and involve changes to the meaning or the direction of the text at either a local (microstructure) or more global (macrostructure) level.

3.2. *Methodology*

Five visiting students in Modern Languages took part in this study. They were asked to 'track' an essay that they had to write as part of the assessment for one of their non-language, 'content' units.

Although most of the units taken by visiting students are the same as those for British students, there are a small number of units whose content is aimed specifically at visiting students. Four of the subjects chose to track an assignment for a unit for visiting students on 'British Identity.' The fifth student chose a literary criticism assignment for a unit on British literature also aimed at international students.

In both units student had to complete two written assignments of about 1,500 words each. The details of the assignments, including the titles of the

essays were given to the students several weeks before the due date. The tasks required the students to research the topic and then synthesise their research into an academic essay. Students had to hand in their final essays to the departmental office by 4:00 pm on the due date.

In terms of English language proficiency, three of the students had been placed in a Stage 4 proficiency class (within the B2/C1 proficiency band on the Common European Framework (Council of Europe, 2001)) the other two were in the Stage 5 class (within the C1 proficiency band on the Common European Framework (Council of Europe, 2001)).

TABLE 1: Details of the subjects background, English proficiency level and essay.

Subject	Name	Country	1st Language	English stage	Final essay length	Grade received	Number of drafts
CY	Carol	Hong Kong	Cantonese	4	1,551	56%	6
JL	Jessica	Hong Kong	Cantonese	4	2,295	56%	8
SN	Sue	Korea	Korean	5	1,876	65%	4
VP	Veronica	Austria	German	5	2,059	67%	6
GG	Gudule	France	French	4	1,743	75%	6

The five students all agreed to be followed through the process of planning, researching, and writing their essays. Data on the students' writing processes was gathered in three stages:

1. They each filled out a short questionnaire about their essay writing habits about four weeks before the due date for the assignment.
2. They each met individually with the researcher on four occasions: once at an early stage of planning, two weeks before the due date of the essay; twice during the week before the due date; and finally on the day the essay was due.
3. Each student provided the researcher with copies of essay drafts at various stages and with a copy of the final finished version.

The nature of this tracking was that they were to periodically save a version of the essay they were working on (they all wrote on the computer using Microsoft Word). They were then to give me the saved versions of the assignment along with a copy of the final version which they handed in.

The changes between drafts were analysed using the Microsoft Word's "Compare Documents" feature. This allows deletions, additions, and changes in formatting to be highlighted in the text.

4. RESULTS

As might be expected, each writer approached the task in their own way.

4.1. *Carol (CY)*

Carol started her essay with a library search two weeks before the deadline. She also did a keyword search on the Internet for material. From the material found, she generated a single page outline consisting of the main topic areas to be covered and the key points under each topic.

The writing phase consisted of turning the key points into paragraphs. During this phase, she used the outline as a reminder of her plan. This plan appeared to be open to a certain amount of change during the writing process.

TABLE 2: Essay length, number of drafts submitted for the study and revisions between drafts for Carol's assignment.

Draft	Word Length		Draft	CY (Carol)			
				Formal	Meaning Preserving	Microstructure	Macrostructure
1	266		1&2	0	0	0	3
2	866		2&3	6	11	5	0
3	1,472		3&4	8	15	5	0
4	1,423		4&5	11	16	9	0
5	1,577		5&6	41	37	6	0
Final	1,551						

Draft 1 contained an outline of key points brainstormed and also some results of the library and online searches. It provided the major headings and subsidiary bulleted points to be taken into the next phase of writing.

Draft 2 comprised the first development of the actual essay. The key points in the outline were, with some modification, used as headings and the text was developed into paragraphs.

Changes between drafts 1 and 2 are mainly deletions of the original bulleted points and the development of the new paragraphs and headings. There was extensive new writing in the second draft. The draft was characterised by development and extension rather than by revision.

Draft 3 continued the expansion of the topic and the development of the essay started in draft 2. A number of pages of text are added almost doubling the length of the essay (and bringing it close to its final length).

The major difference between drafts 2 and 3 was the extension of the text. There were, however, a number of revisions made to the text. These were mainly surface, or microstructure text base changes.

This suggests that Carol was, at this point, reasonably happy with the text so far produced. The text base changes can be seen as fine tuning the essay's direction.

Draft 4 contained a few minor additions over draft 3, but did not include any major extensions to the text.

Differences between drafts 3 and 4 are mainly surface, or microstructure text base changes. The changes can mainly be characterised as 'finding other ways of saying the same thing.' A few of the microstructure changes appear to represent a rethinking of the focus of the paragraph, but there are no major reworkings. A few of the changes actually reinstate text from draft 2.

Draft 5 brought the essay very close to its final form. The only extensive additions to the text were in the bibliography. Carol said that she keeps the sources for references in a separate file during the writing and pastes them into the essay when it is nearly complete.

A large part of the changes in the first half of draft 5 are a reversion to the ways things were said in draft 3. It is only in the second half that things are said differently.

Once more, the changes between drafts 4 and 5 are mainly surface changes with rather fewer microstructure text base changes. The microstructure changes primarily clarify the meaning of points or add small amounts of information.

Draft 6 was the final version of the essay as handed in to the Modern Languages office.

The changes between drafts 5 and 6 primarily represent a cleaning up of the text – clarification of points and proofreading to remove errors. A few references were also added.

The length of time between the first and final drafts of Carol's essay was five days.

4.2. *Jessica (JL)*

Jessica (JL) started the essay quite late as she was worried about an exam she had to take on. Her initial outline was mainly in her head. She did write the main headings on a scrap of paper, but that appeared to be a reminder rather than the basis for her writing. She claims that the outline of the content comes first in her essay writing and the research time is spent finding support for her ideas. She said that sometimes something she finds will cause her to change part of her plan.

The second stage is a list of main headings with references to source material listed under each.

She uses the outline as an *aide memoire* as she writes the essay. Using a split screen, she works from the outline while writing the new text at the end of the document. Her final stage is to delete the outline leaving just the final text.

TABLE 3: Essay length, number of drafts submitted for the study and revisions between drafts for Jessica's assignment.

Draft	Word Lenght		JL (Jessica)			
		Draft	Formal	Meaning Preserving	Microstructure	Macrostructure
1	37	1&2	(Draft 1 = outline only)			
2	72	2&3	0	0	0	0
3	86	3&4	0	0	0	0
4	297	4&5	0	2	9	0
5	662	5&6	0	2	15	1
6	1,305	6&7	0	0	5	3
7	2,098	7&8	9	9	1	1
Final	2,295					

Draft 1 was a paper outline made for my benefit for our second meeting. The points on the sheet did form the starting points for research and for the plan of the essay.

Draft 2 was the first work on the computer. It consisted of a number of headings with source references. The headings were similar, but not identical to those on the original outline. These key points in this outline reflected the topics found during library and internet searches.

Draft 2 was not a simple revision of draft 1. It is a separate development loosely based on the plan in draft 1.

Draft 3 was very similar to draft 2, adding mainly the sources of information to be used in the essay proper.

The difference between drafts 2 and 3 was the addition of three paragraphs at the start of the text: two under the heading 'introduction' and one under the heading 'definitions.'

Draft 4 was the first draft in which some paragraphs were set out as they would be in the final essay.

Between drafts 2 and 4 only new text was added. No changes were made to the text in drafts 2 or 3.

Draft 5 continued to add text and also a list of internet sources of information.

Changes between drafts 4 and 5 were the addition of information and sources and also the deletion of some of the references under the headings in the outline part of the essay.

Draft 6 was substantially longer than the previous drafts and the overall structure of the essay was visible for the first time.

Differences between drafts 5 and 6 included the addition of several new paragraphs as well as the deletion or rearrangement of some of the other parts of the essay.

Draft 7 was the first draft to look like a finished essay. It was considerably longer again than draft 6 and all bits of the original outline were either incorporated into the body of the essay or removed.

Changes between drafts 6 and 7 included the addition of more paragraphs extending several of the points covered and the deletion of the unwanted parts of the original outline. Almost no changes were made to the body paragraphs or headings used in draft 6.

Draft 8 was the final draft of this essay and was the one handed in to the Modern Languages office. At 2295 words it was some way over the limit of 1500 words set for this assignment.

Changes between drafts 7 and 8 were primarily proofreading changes – mostly surface changes, and the addition of the final bibliography (replacing the list of sources used up to this point).

The length of time between the first and final drafts of Jessica's essay was five days.

4.3. *Sue (SN)*

After deciding on the topic of the essay, Sue considered the content she would like to include and the direction the essay should take. She then started to research books, the Internet and question fellow students to try to find material to fill in her plan.

Once she had decided on a plan of action, she made a written outline using the main topic areas as headings.

Writing the essay was a case of filling in the detail of the topics. Writing progressed with the main body of the essay first followed by the conclusions and then the introduction. She explained that if she did the introduction first, she might end up having to revise it at the end.

Although she stuck quite firmly to her first written plan, she claimed to review this continually and to make changes to the plan, as they might be required.

TABLE 4: Essay length, number of drafts submitted for the study and revisions between drafts for Sue's assignment.

Draft	Word Length		Draft	Formal	Meaning Preserving	Microstructure	Macrostructure
					SN (Sue)		
1	113		1&2	1	0	1	4
2	443		2&3	4	8	7	4
3	1,923		3&4	23	50	3	0
Final	1,876						

Draft 1 was an outline for the essay. It consisted of numbered headings and sub-headings covering the key areas of the essay's development. Most of the headings and sub-headings had a single sentence of body text attached giving the broad direction for that subject.

Draft 2 was still at a relatively early stage of development. The text under one of the main headings had been developed into a few paragraphs of text.

Two sentences had also been added under the 'Introduction' giving a brief outline of the direction the discussion would take.

Most of the changes between drafts 1 and 2 consisted of additional text. However, a couple of the original headings had been modified (this was done based on the availability of source material for the topics).

Draft 3 represented a major step towards the final essay. Most of the headings and sub-headings had been filled out with text and the introduction had been fleshed out considerably.

Most of the text from draft 2 was retained in this draft, with only a few deletions. A bibliography had also been added to this draft.

Draft 4 was the final version of the essay handed in to the Modern Languages office. Although there were a considerable number of revisions between this draft and draft 3, the two drafts were of a similar length. Most of the revisions were surface or microstructure text base changes. These are typical of a final proofreading, correcting and tidying up of the text.

The length of time between the first and final drafts of Sue's essay was six days.

4.4. *Veronica (VP)*

Having decided on a topic, Veronica researched the possible content of her essay from books and on the Internet. She made copious notes and copied out in full any quotes (up to several lines long) that she thought might be useful for the essay. These notes came to several pages for a 1500 word essay. She numbered all of these notes and when she used a quote or an idea, she added the reference number so that she could trace the reference.

Veronica said that she made a plan for her essay in her head. She did not write down an outline at any point, but simply started writing from the introduction. Ideally she would have liked to simply sit down and write the essay from beginning to end. She claimed that she stuck to the plan she had decided on and that this plan, although it was open to change, rarely varied once she had started writing.

Veronica's main approach to writing was to get something on paper and then to review it to decide if it was exactly as she wanted it. This approach meant that she wrote and then rewrote a number of sections as the essay progressed.

She started to research the essay about 10 days and started her writing about 7 days before the deadline. However, the bulk of the writing was concentrated towards the end of the time period. The day before the deadline, she found that she was unable to concentrate on the essay (she claimed writer's block).

She started the bulk of her writing late on the evening before the deadline and continued to write all night, finishing at about 10:00 am on the due day.

TABLE 5: Essay length, number of drafts submitted for the study and revisions between drafts for Veronica's assignment.

Draft	Word Length		Draft	VP (Veronica)			
				Formal	Meaning Preserving	Microstructure	Macrostructure
1	585		1&2	0	0	0	2
2	478		2&3	0	0	1	4
3	254		3&4	0	0	0	2
4	1,131		4&5	0	0	2	2
5	1,486		5&6	8	30	1	0
Final	2,059						

Draft 1 went straight in to the essay without any attempt to commit an outline to paper. The introduction was written almost in its entirety and there were a number of references listed in a bibliography, but no other text had been written.

Draft 2 was very similar in length to draft 1. It also consisted of an introduction. However it was almost entirely different from draft 1. The whole of the text of draft 1 had been deleted and rewritten. The bibliography had also been removed (to another file). Although there was no change of topic in the essay, the perspectives on the subject taken in drafts 1 and 2 were different. This represented a searching for the form the essay should take and suggests that the plan she claimed she had in her head at the start of writing was not clearly formed.

Draft 3 was also of a similar length and consisted of a third rewrite of the introduction. Only a few sentences of the introduction written in draft 2 remained.

Draft 4 was twice the length of draft 3 and represented the first major stab at getting the essay written. It presents another almost complete rewrite of the

introduction (only the first four lines of draft 3 remain), but manages to add a considerable portion of the body of the essay as well.

Draft 5 continued the expansion of the essay, adding more length to the essay overall. This time the introduction written in draft 4 remained intact. However, most of the new text added to the main body of draft 4 had been deleted and rewritten.

Draft 6 was the final version of the essay. This contained no major rewrites and the changes between drafts 5 & 6 were typical of proofreading, correcting and clarifying the text. The additional length of this draft over draft 5 comes from the bibliography being added to the end. The bibliography was stored and developed in a separate file and was pasted into the essay in the final stage of writing and proofreading.

The length of time between the first and final drafts of Veronica's essay was seven days.

4.5. *Gudule (GG)*

Gudule claimed that she pre-planned for some days before writing virtually the whole essay in a single burst. She provided six drafts, but most of the changes made in drafts 2 to 6 amounted to tidying up.

TABLE 6: Essay length, number of drafts submitted for the study and revisions between drafts for Gudule's assignment.

Draft	Word Lenght		Draft	Formal	Meaning Preserving	Microstructure	Macrostructure
					GG (Gudule)		
1	1,342						
2	1,338		1&2	40	6	0	0
3	1,622		2&3	0	3	0	0
4	1,676		3&4	1	5	2	0
5	1,744		4&5	2	7	0	0
Final	1,743		5&6	0	10	3	0

Draft 1 went straight in to the essay without any attempt to commit an outline to paper. The body of the essay was written almost in its entirety and there were a number of references listed in the text, but no bibliography.

Draft 2 was very similar in length to draft 1. It tidied up on draft 1 and most of the revisions were formatting changes. There were a few meaning preserving changes, but nothing more.

Draft 3 added some references to the text, a conclusion and a bibliography. No other changes were made.

Draft 4 again only made minor changes to the text. There were six surface changes and two additions of sentences. These sentences expanded on the idea already presented and didn't change it. One more item was also added to the bibliography.

Draft 5 double spaced the whole assignment and made seven surface changes.

Draft 6 was the final version of the essay. This contained eleven more surface changes over draft 5.

The length of time between the first and final drafts of Gudule's essay was three days.

It is clear from this that Gudule's revisions of her ongoing essay, were largely surface changes that tweaked the text without changing it substantially. The number of permutations made between draft 5 and the final version amounted to 'beautifying the text' i.e. trying to find better ways of saying the same thing.

5. DISCUSSION

The discussion of the writing process at the start of this paper contrasted the earlier, linear view of writing with the current conception of writing as complex and non-linear. The analysis of the draft-by-draft writing of the subjects in this study suggests that although their writing is clearly a complex, hierarchical and recursive process, it is also one that is goal directed. They have a start point and a desired end and their goal is achieved through something, more often than not, approximating a linear development of the text in accordance with a plan.

The writing of the students who took part in this study was clearly goal driven. It involved a problem solving approach to the task at hand in which the writer's composing strategies appeared to be aimed at creating, developing and supporting an argument in their text. This is called knowledge transforming by Bereiter & Scardamalia (1987) and they contrast it with knowledge telling

in which the writer approaches the task simply as a vehicle for displaying knowledge.

The writers are all individuals who approached each task in their own way. However, there were clear similarities, possibly task induced, in the way they dealt with their assignments and where, when and how they revised. Text-base, content, revisions tended to occur in the early to mid stages of the essay writing. Surface, linguistic, revisions, although they could and did occur anywhere, occurred most often towards the end of the writing. Only one of the students made any global content (macrostructure) changes between the penultimate draft and the final version of their essay. Almost all of the revisions at this stage were 'tidying up' a completed plan. All of the students made linguistic 'editing' changes to their texts after they had essentially completed the text.

The chart shows the distribution of each revision category across the early to late drafts of the assignment. Gudule's revisions have been left out as they are essentially all late draft revisions. The first two of Jessica's 8 drafts have been omitted and Sue's have been counted only in 1–2, 3–4, & 5–6.

FIGURE 2: Distribution of revisions between drafts as a percentage
of the total number of revisions of each type
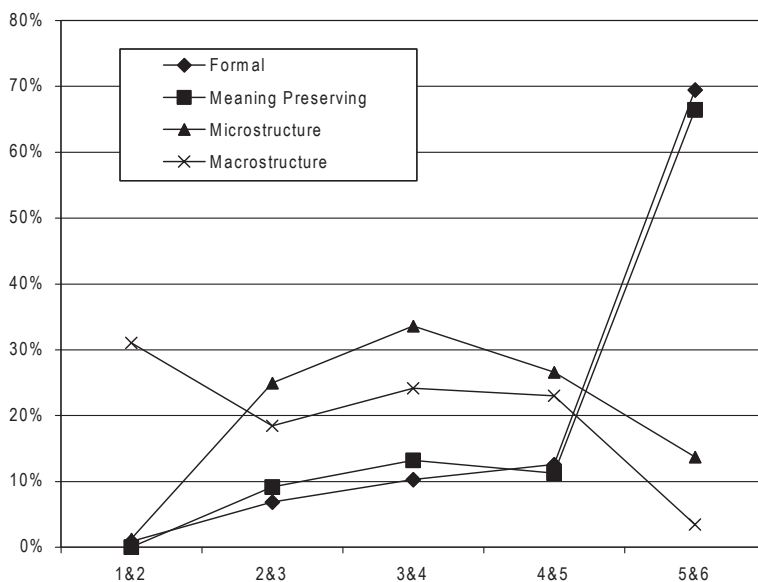
It is clear from the students' own comments that much of the early writing took place while they were still formulating or finalising their plan for the overall direction and perspective of the essay. This is very much in line with Sommers' (1980) finding that "the experienced writers describe their primary objective when revising as finding the form or shape of their argument" (p. 384). Macrostructure changes to the gross content and conceptual direction of the text appear to reflect this search for a form or shape which, once discovered, allows the writer to drive forward towards the goal of a 'finished' text. The students in this study appeared to finalise their plans in their own ways and at different points in their writing. Gudule demonstrated that even with a 1500 word assignment written over several days, it is possible to formulate a plan and produce it in one burst.

6. CONCLUSION

With regard to the research questions asked in the introduction to the current study (section 3), the data suggests some patterns in the writing of the five subjects in the study, which allow the following observations:

Changes to the text in the samples gathered occurred from draft to draft throughout the process of writing. However, these revisions were not uniformly distributed. Each writer had their own approach to the process and a slightly different weighting of revisions at different stages in the production of the final text. Revisions to the linguistic structure of the text and those to its content were not equally distributed in the sample. Content changes, and particularly those which represented fundamental changes in the direction of the text, tended to be larger in scope and therefore less numerous than the linguistic changes. They also tended to occur earlier in the composing process, with major changes occurring in the first few drafts and relatively minor changes thereafter. Linguistic changes, although they could and did occur at any time in the writing process, tended to be relatively fewer in the earlier stages of text production and to increase towards the end with a final 'tidying up' of the text apparent in most of the sample drafts.

Although this study attempts to link the development of a plan with the distribution of revisions between drafts of the text being produced, it only looks at changes to text already committed to 'paper' by the writer. It does not look at changes to plans made before the writer types the keys or the changes made and then remade before the draft was saved. As such, it provides a series of snapshots of the development of the students' assignments.

There are also limitations involved in the tracking and analysis of the revisions made by the students. An individual macrostructure change will

almost inevitably entail a greater amount of text being moved, deleted or replaced than a formal change. A single macrostructure revision listed in a table gives no indication of how much text was moved, added, deleted or replaced.

In order to gain a clear insight into the relationship between text generation and text change in the development of a text, some way has to be found of linking the generating of new text in a draft with the revisions made.

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