

## ABSTRACT FOR JOURNAL ARTICLES

Drs. Suharno, M.Ed  
Fakultas Sastra Undip  
**Abstrak**

*Abstrak merupakan bagian yang sangat penting dalam publikasi karya-karya ilmiah untuk jurnal internasional; setiap penulis diwajibkan mencantumkan abstrak dalam naskahnya untuk keperluan publikasi. Tujuan artikel ini adalah untuk meneliti sejumlah abstrak dalam artikel ilmiah berbahasa Inggris yang ditulis oleh penutur asli. Aspek-aspek yang diteliti antara lain struktur wacana, penggunaan kata, paragraph, dan jumlah kata. Hasil penelitian menunjukkan bahwa abstrak yang ditulis oleh non-penutur asli masih terdapat kelemahan, yaitu tidak sesuai dengan prinsip-prinsip yang dikemukakan Swales (Moves Analysis) di samping beberapa kesalahan bahasa.*

**Kata kunci:** abstrak, artikel, pilihan tensis, penyusunan paragraf.

### 1. Background of the Study

Writing scientific papers or articles for publication is one of the main tasks of university lecturers. They must write articles or books in order to survive; writing articles especially writing scientific articles in English might also help them promote their career and prestige as lecturers. The reason is that university regulations are not yet severe-unlike universities in developed countries (e.g. USA) with a “publish or perish” principle-or they are not well motivated to write articles. In Indonesia, only a small number of lecturers in each university publish articles in international academic journals, or participate in international conferences. This lack of productivity may be due to the following reasons:

- (i) they rarely practise writing in English
- (ii) they still have language problems; and or
- (iii) they do not have any motivation to improve themselves.

As a teacher of Service English Unit (SEU) Diponegoro University, I noticed that writing abstract is one of the major problems for EAP class participants (Diponegoro University lecturers). Abstract is an essential part of journal articles, and a journal editor usually requires an abstract if a lecturer sends an article to the journal editor for publication. Writing abstract can be a problem for an inexperienced lecturer. Therefore, this project is intended to gather information which might be used to assist the design of an academic writing course for lecturers of Diponegoro University who have the potential to take postgraduate studies in English-speaking countries (e.g. Britain, USA, Australia, etc.). The course participants may come from different faculties, e.g. Medicine, Engineering, Marine Sciences, Economics, Fisheries, etc.

### 2. Review of the Literature

According to Packham et al (1985:57) “the abstract is used to let readers know quickly what your assignment says. It is a brief summary of the whole paper. It is placed right at the front immediately after the title page. It should normally be 100-125 words long and should be written as a single paragraph”. Meanwhile, Stapleton (1987:21) states that the readers will only pay attention to the abstract after the readers have been attracted to the paper by the title. As the abstract should be written briefly, some students/ participants (i.e. university lecturers) find difficulty in writing it. This may be due to, partly, linguistic features such as tense shifts which are quite common

in academic English, and the extreme compression required. Another problem may be emotional: “abstracts are in general expected to be non-evaluative, non-emotive, yet it is difficult sometimes to be entirely neutral when attempting to describe one’s own work” (Gutkowski & Urquhart, 1989: 1).

Based on the discourse structure, Day (1979) distinguishes two types of abstract: informational and indicative. The first type is designed to encapsulate the paper; so it can and should briefly state the problem, the method used to study the problem, and the principal data and conclusions. The second type is sometimes called a descriptive abstract and is designed to indicate the content of a paper, essentially serving as a table of contents, making it easy for potential readers to decide whether or not to read the paper. Because of its descriptive rather than substantive nature, it should not be used as abstracts in research paper, but it may be used in other types of publication (review papers, conference reports, the government report literature, etc).

Day (1979), Stapleton (1987), and Weissberg & Buker (1990) propose four features which should exist in abstract sections, especially informational abstracts. I will refer to these sections as *moves* (Swales 1981). Thus, the four moves are as follows:

- Move One : The principal objectives/ scope of the investigation.
- Move Two : The methods/ procedures employed.
- Move Three : Summary of the results.
- Move Four : The principal conclusions

While Day only focuses his research on rhetorical structures of abstract, Graetz (1985) is more interested in observing linguistic features in abstract, especially opening and concluding lines/ sentences. He collected 87 abstract samples chosen from a number of scientific journal articles. Eight journals were taken from health science, 13 from social sciences, 5 from education, and 15 from humanism. The research result in opening lines is grouped into ‘syntactic-grammatical’ and ‘semantic-rhetorical’ categories (a model developed by Widdowson, 1979: 101-111). The first two groups use passive construction or perfect tense to explain topics, procedures, or problems in the opening lines. The third and fourth groups use thesis statement and the fifth group contains sentences which refer to the writer. And Graetz divides concluding lines into two groups:

1. Type A: closed-absolute

In this type the language used is more forceful when its aim is merely to conclude, e.g.

- This study concludes with...
- Finally...
- No x’s were found.

The sentences or rhetorics used in type A are among other things present tense, affirmative, declarative, absolute negative, comparison, and function: to close and/ summarize.

2. Type U: open-uncertain

The sentences or rhetorics used are among other things conditional sentences, qualification/ uncertainty, implication, function: conclusion is up to the reader, and descriptive mood (passive, thesis).

Graetz further explains when simple present and past tense are used, the conclusion is just a summary. On the other hand, when the aim of conclusion is given to the reader for contemplation the language used is less forceful and grouped as open

or uncertain. Accordingly, the type U conclusion will use qualification, suggestion, question, implication, etc. Example:

- No Z's were found suggesting (...).
- Subsequently analysis revealed (...).
- It is likely that (...).

The following are some principles of writing abstract summarized by Graetz (1985):

#### **Definition**

"It should be continuous narrative, written in whole sentences. It should not use separate paragraphs for the commonly recurring features of the problem, summary, introduction, method, etc. It should reflect the organisation of the article, by following the exact order if possible. It should provide more information than the title. The title should not be repeated. The abstract should be brief, not waste words, yet be long enough to convey the author's concept. It should be non-critical and unbiased; it is not a review. It would be unambiguous, intelligible, readable and a complete item in its own right. It should be written in the author's own language (as far possible).

#### **Purpose**

It will give the reader an exact and concise knowledge of the total context of the very much more lengthy original, a factual summary which is both an elaboration of the title and condensation of the report, so that he can judge whether he needs to consult the full text. It therefore points out what is not of interest and what not to read.

#### **Language**

The abstract is characterised by the use of past tense, third person, passive and the non-use of negatives. It avoids subordinate clauses, uses phrases instead of clauses, words instead of phrases. It avoids abbreviation, jargon, symbols, and other language short-cuts which might lead to confusion. It is written in tightly worded sentences, which avoid repetition, meaningless expressions, superlatives, adjectives, illustrations, preliminaries, descriptive details, examples, footnotes.

### **3. Corpus**

This research deals with a number of abstracts (taken from scientific papers written by non-native and native speakers). I selected nine abstracts: the first five were written by non-native speakers (i.e. Diponegoro University lecturers) and presented in international conferences or published in international journals. The abstracts were selected at random from several faculties at Diponegoro University. Two abstracts (I, II) were selected from Medical Faculty; two abstracts (III, IV) from Economics Faculty (Ecology); and one abstract (V) from the Center for Marine Resources (Biology). The second group of four abstracts were written by native speakers. I tried to select abstracts which have the same topic as above, i.e. one paper (VI) is on linguistics; one paper (VII) on Health Education/ Medicine, and two papers (VIII, IX) on Marine Biology. Those abstracts (papers) were published in scientific/ research journals. For as of reference, I shall refer to the abstracts as (e.g. Abstract I-IND, Abstract VI-NS, etc.-IND meaning it was written by an Indonesian academic, and NS by a native speaker).

The following are chosen papers (abstracts):

- I-IND : *The Health Status of the Elderly Living in Government Institutions in Indonesia*. (By Fatimah Muis et al. Research Institute/ Medicine, 1987).
- II-IND : *Infant Feeding Practice In Semarang: Methodology and Some of the Results*. (By Fatimah Muis, Research Institute. Presented at a Workshop, Gadjah Mada University, 16 September 1987).

- III-IND : *Some Aspects of Brackish-Water Pond Operation in Central Java, Indonesia.* (By Wiratno, Faculty of Economics. Tropical Ecology and Development, pp. 1071-1076 (1980)
- IV-IND : *Ecology of North Central Java Coastal Villages: A Socio-Economic Point of View* (By Budiningharto, Faculty of Economics). Tropical Ecology and Development, pp. 1077-1083. (1980)
- V-IND : *The Ecology of Biological Resources on the North Coast of Central Java, Indonesia* (By I.B. Hendrarto, Center for Marine Resources Development). Tropical Ecology and Development, pp. 1037-1045. (1980)
- VI-NS : *Systematic Correction an Analysis of Composition Errors.* (By James Hendrickson) In *Error Analysis and Error Correction in Language Teaching.* Occasioanl Papers No. 1, SEAMEO Regional Language Center, RELC, p. 13282, Singapore (1983).
- VII-NS : Attitude Modification in Health Education through an Interventive, Anti-smoking Program Incorporated within Traditional Science Curriculum. (By UI Zoller and Tsipora Maymon). *Journal of Research in Science Teaching*, 6 (5), 385-399 (1989).
- VIII-NS : The Visual Pigments of a Deep-Water Malacosteid Fish. (By Frederick Creescitelli), *Journal of Marine Biology Association U.K.* 69, 43-51 (1989).
- IX-NS : The Effect of Feeding Levels on the Fecundity of Plaice (*Pleuronectes Platessa*). (By J.W. Horwood, M. Greek Walker, and P. Witthames). *Journal of Marine Biology Association, U.K.* 69, 81-92 (1989).

Seeing the various topics listed above, I am readily aware of confronting possible difficulty in text analysis as they are, to some extent, different from one another. But they can roughly be divided into two types: social sciences (Linguistics) and sciences (Biology/ Medicine). The different scientific papers (abstract section) are deliberately chosen for the following reasons:

1. In teaching academic writing to diponegoro University lecturers, I will deal with lecturees who come from different fields of study, (e.g. Medicine, Language, Biology, Economics, Engineering, etc.); so my findings of the text analysis in different papers (abstract section) will be useful for designing an academic writing course.
2. By analyzing the abstract sections written by my colleague (non-native speakers) I wish to see their writing style and perhaps some weaknesses, and thus I can see what they really need from an academic writing course.
3. The abstract sections written by native speaker will also be analyzed so that I can compare them with non-native speakers in the hope of finding whether both groups of abstract have similar or different features in terms of organization, (e.g. discourse-pattern), and language (e.g. vocabulary, style, sentence length/ complexity, tense and voice, personal or impersonal contractions, etc). The number of NS abstracts is unequal to the number of IND abstracts (NS=4; IND=5). The imbalance will not materially affect the text analysis. The NS abstracts are used simply as a “yardstick”, representing the IND fields of study.
4. From the analysis, I expect to identify common features shared by both native and non-native writers and to identify certain features (both linguistic and organizational) which non-native writers lack. Hence, I will be able to input such features in the design of an academic writing course for my colleagues.

#### **4. Method of Analysis**

Having selected the abstracts, it is necessary for me to outline the method of analysis. It will be a genre-based analysis, as it is only concerned with one type of papers (abstract section), i.e. scientific papers. Swales (1985) defines “genre” as follows:

1. A genre is a recognized communicative event with a shared public purpose and with aims mutually understood by the participants within that event.
2. A genre is within variable degrees of freedom structured and standardized in terms of positioning, form, and intent.

In analyzing the texts (abstract section), I will focus on the organizational features (macro-structure). This approach, according to Hutchins (1977), is to take a more global perspective, to seek to understand the overall organization of texts, to understand how one episode of a narrative, for example, develops from another and how paragraphs and chapters are built into cohesive wholes. Eventhough the analysis concentrates on the macro-structure, the linguistic features (micro-structure) will not be neglected, since there is always a close relationship between macro-structure and micro-structure). For example, Lackstrom et al. (1973) argue that grammatical choices are determined by rhetorical considerations; they show that, for example, the choice of verb tense depends on the degree of generality intended.

The discussion of linguistic features (micro-structure) such as tense and voice will not be put into separate sections, but will be incorporated with the macro-structure under each section. Thus, the features discussed will always be related to rhetorical functions. The discussion of rhetorical sections will culminate with a comparative summary between IND and NS authors: what is common, specific or different in the texts under analysis.

The objectives of this study, then, are as follows:

1. to explore a number of approaches to the analysis of written text;
2. to adopt a suitable method of analysis to the texts chosen;
3. to compare and discuss the finding of the text analysis between IND and NS authors; and
4. to design a course in academic writing based on the findings of the analysis, for academic staff at Diponegoro University, Semarang.

## 5. Analysis

### 5.1. Organizational Features

In examining the organising features, I will apply Day’s pattern (1979). Day proposes four features which should exist in abstract sections, especially informational abstracts. I will refer to these sections as moves are as follows:

MOVE ONE : The principal objectives/ scope of the investigation.

MOVE TWO : The methods/ procedures employed.

MOVE THREE : Summary of the results.

MOVE FOUR : The principal conclusions.

The following is a summary of the abstract sections of my corpus.

No of Paper	Move One	Move Two	Move Three	Move Four
I - IND	.	.	.	.
II - IND	.	.	.	-
III - IND	.	-	-	-
IV - IND	-	-	-	.
V – IND	-	-	-	.

VI – NS	.	.	.	.
VII – NS	.	.	.	.
VIII – NS	.	.	.	.
IX - NS	.	.	.	.

Table 1 shows that there is still a great difference between IND and NS papers in terms of organization. In IND papers, a number of moves do not exist (50%) whereas in NS papers all moves exist (100%).

The identification of each move in the abstract section is also quite difficult for the average reader, as each writer has a different style in expressing the moves. For instance, the first move (i.e. objectives/ scope of study) may be expressed explicitly or implicitly. Only one paper (VI-NS) has an explicit signal for expressing the move: “The purpose of this study was.....”, and the rest have implicit signals. Consider the following:

1. The effectiveness of a smoking-prevention program-incorporated within a traditional curriculum-was assessed in terms of attitude modification in such categories as health, peer pressure, and social image as related to smoking. (VII-NS)
2. Fifty-three elderly living in an institution were examined for their physical, nutrition and mental condition. (I-IND) (sic)

The two extracts above are the first sentences of their abstracts sections. It is quite difficult to decide whether those statements are the first moves (scope of study) as there are no explicit signal as in VI-NS. We could say that the two statements are methods/ procedures employed, but they could also be identified as the objectives/ scope of study by virtue of the phrases: “the effectiveness of a smoking-prevention program...in such categories as health, peer pressure, and social image...” and “...for their physical, nutrition, and mental condition” (sic).

The second move (Methods) is less difficult to identify as there are ‘key’ words which signal how the data are handled. The writers usually use phrases such as “was assessed”, “was conducted”, “was interviewed”, “were examined”, “was carried out”, etc. To describe the methods/ procedures used in the investigation.

The third move (Results) always come after the methods/ procedures are described. It is easier to identify the third move as the writer always uses the key words such as “the examination revealed”, “the study indicates”, “the study shows”, etc. If we do not find the above phrases, we can still identify the results by means of verbs of results, for example: “.....of those fad on the lower ration, 39% *produced* no granular oocytes.....”, “Retinal extractions *were found* to contain two photo pigments....”, etc.

The fourth move (conclusion) is signaled by phrases such as “The results *suggest* that...”, “it *was inferred* that...”, etc. It should be remembered that a conclusion is the comment of the author of the article; it is not a description of facts. Of the nine papers examined only two papers do not contain move 4 (Conclusion).

## 5.2. Rhetorical and Tense Shifts

The tenses used in the abstract section move back and forth between past and present sometimes perfect tense. It seems that rhetorical shift is not always accompanied by tense shift. For instance, in paper IX-NS when the writer states the

scope of study, methods, and results, he uses the past tense; and the tense shifts to the present when he states the conclusion. Consider the following extracts (IX-NS):

(Scope of Study).....an experiment *was conducted* to investigate whether these changes (yearly variations in fecundity) could be generated in the laboratory, by feeding plaice different levels of ration.

(Methods) One group of plaice *was fed* at a rate of about 2-2.3 % of wet body weight per day, and a second group *was fed* initially 0.5 % and later 1.8 % per day.

(Results) Of those fed on the lower ration, 39 % *produced* no granular oocytes, where all fish on the higher ration *produced* granular oocytes.

(Conclusion) The results *suggest* that food level can significantly affect fecundity.....

Paper VI-NS also uses the same pattern as paper IX-NS, but the rest (III-IND, IV-IND, VII-NS, and VIII-NS) use a different pattern. For instance, in paper VIII-NS, the writer uses the present tense to state the scope of the study (i.e. “The present investigation is a confirmation and extension of the idea that visual pigments...”), and the past tense to state conclusion (i.e.....it *was inferred* that.....). In II-IND the writer uses the present tense to state results, (i.e. “Extended breastfeeding of high daily frequency is generally practised. Feeding patterns are breastfeeding and food supplement....”). In paper VII-NS the writer uses the present tense to state results (i.e. “The study *indicates* that most relevant attitudes....”).

It is also interesting to comment on the shift of tense in paper I-IND. Consider the following statements:

1. All of them *claimed* that they are happier living in the institution than in their previous home.
2. The examination *revealed* that their personal hygiene is fairly adequately taken care of.

In the above statement there is no agreement between ‘reporting verb’ and ‘reported verb’ (*claimed...are; revealed...is*). There are two possibilities here:

- (1) the writers, in fact, have not yet mastered the English tense system, or
- (2) if they have already mastered such a system, they must have a good reason to shift the tense in reported verbs.

The second possibility can be explained as follows: in those statements, the writers want to show that elderly people’s happiness at living in the institution and their personal hygiene which is well taken care of are still true at the time of reporting. So, this kind of shift is possible and it is in line with what Swan (1980: 535) says: “....sometimes, even after past reporting verbs, the tenses are the same as the original speaker’s. This happens when we are reporting people saying things that are still true when we report them”. And the tense shift above also agrees with Day’s (1979: 119) principle in scientific writing: “It is correct to say, ‘Smith showed that streptomycin inhibits *S. Nocolor*.’ It is also correct to say ‘Table 4 shows that streptomycin inhibited *S. Everycolor* at all pH levels’.”

Sometimes it is quite difficult for the writers (especially non-native speakers) to shift tense (e.g. from present to past or Vice-versa). Consider the following paragraphs:

The examination *revealed* that their personal hygiene *is* fairly adequately taken care of. Diseases found *are* rheumatism, cataract lentis, hypertension, pruritis senilis early symptoms of decompensatio cordis, exzema, genito-urinary disorder and hernia. Half of them *were* anemic. A sub-sample of 30 elderly *were interviewed* for their mental

condition. All men *showed* abnormality of some degree, while in women half of them *had* the problem. Impairment in social functioning due to mental disorders *seems* to be another reason which *brought* them to the home for the aged.

(I-IND)

In the first paragraph, the writers shift tense: past-present-present-past. The shift of tense in the first sentence has already been discussed. But the tense shift between the second and third sentences is not understandable. In the second sentence, they use the present tense and then shift to the past tense in the third sentence, without an obvious reason. The use of the present tense in the second sentence is understandable because the phenomena (i.e. diseases) they observe are still true at the time they report them, but suddenly they shift to the past time in the third sentence (“Half of them were anemic”). This sentence should be in the present tense as it is closely related to the second sentence: there is no rhetorical shift.

In the second paragraph, the writers use the past tense in the first and second sentences and shift to the present tense in the third sentence, and again to the past tense in the subordinate clause (“which brought them”). The tense shift here seems to be accompanied by rhetorical shift. In other words, in the first and second sentences, the writers describe the methods and results. And they shift to the present tense in the third sentence as they want to give their comment or conclusion (“seems to be”).

So, the tense usage described above indicates that the IND writers have not yet mastered the English tense system, and those two paragraphs could be used as an example of inappropriate tense usage.

### 5.3. Types of Abstract

It seems there are two types of abstract in the data. Table 1 shows that papers III-IND, IV-IND, V-IND do not contain the complete moves, each paper only has one move. Therefore, based on Day’s classification there are two types of abstract in the nine papers: informational and indicative. Papers I-IND, II-IND, VI-NS, VII-NS, VIII-NS, IX-NS, contain informational abstracts as they contain all or most of the four moves; and papers III-IND, IV-IND, V-IND contain indicative abstracts. The tenses used in this latter group of abstracts also differ from the rest. The writers mostly use the present tense instead of the past. This does not agree with Day’s principle of writing abstract sections. He says: “Most of the Abstract should be in the past tense, because you are referring to your own present results” (Day 1979:110).

The following is an example of the two types of abstracts:

#### 1. *Informational Abstract*

Previous field studies have recorded yearly variations in fecundity of 40-60% in similar sized plaice, and an experiment was conducted to investigate whether these changes could be generated in the laboratory, by feeding plaice different levels of ration. One group of plaice was fed at a rate of about 2-2.3% of wet body weight per day, and a second group was fed initially 0.5% and later 1.8% per day. The experiment lasted for a period of 406 days.

Of those fed on the lower ration, 39% produced no granular oocytes, whereas all fish on the higher ration produced granular oocytes. A comparison between the two groups, of those which did produce granular oocyte, found that the better-fed fish had 59% more granular oocytes, but the differences were less pronounced for the smaller, mature fish. Numbers of rating oocytes are also recorded.

The results suggest that food level can significantly affect fecundity, and also revealed a new mechanism for regulation of fecundity in the plaice. The lack of granular oocytes was not due to atresia, but to an early decision not proceed with



gonad development; whether this is of practical significance for the population of plaice in the wild is not yet established. (IX-NS)

## 2. *Indicative Abstract*

Fishery is one of the major sectors in agriculture in Indonesia. Brackish-water pond is considered a marine, small scale fishery. Brackish-water pond operation is an important means of subsistence for the people who live in the coastal areas such as the North coast of Java Island and the coast of South Sulawesi.

The paper gives a description of the brackish-water ponds, their location, operation, and development. It was only at the fourth decade of the twentieth century and especially after the Second World War that there were more brackish-water ponds. The social and economic aspects of brackish-water pond operation as well as the ecological aspects are also discussed. (III-IND)

## 5.4. Paragraphing and Length

Paragraphing and length of the abstract sections are also worth mentioning here. The reason is that there is no uniformity in this regard. In papers II-IND, IV-IND, V-IND, VII-NS, VIII-NS the abstracts are written in one paragraph; and in papers I-IND, III-IND, VI-NS, IX-NS, the abstracts are divided into two or three paragraphs. This distinction shows that there is no definite standard as to whether abstracts should be divided into paragraphs; it seems to depend on each writer's style. One of the abstracts (paper IX-NS) is divided into three paragraphs: the first paragraph states the objectives/ scope of study and the methods employed, the second states the results, and the third states the conclusion. I would say this abstract is near to an ideal version, as it contains the four moves and the paragraph division shows how each move is described.

With regard to length, Day (1979: 20) says: "the abstract should not exceed 250 words in most primary journals". In the nine papers, the length of the abstracts ranges from 113 to 250 words.

## 5.5. Comparative Summary

From the discussion above I can draw a comparative summary as follows:

### 5.5.1. *Organization*

In terms of organization (i.e. four moves), there is still a wide difference between IND and NS. The following is a list of the number of moves in the Abstract sections of both IND and NS.

IND	NS
I = 4	VI = 4
II = 3	VII = 3
III = 1	VIII = 1
IV = 1	IX = 1
V = 1	
10	16

In the other words, IND abstracts are characterized by a 50% complete move structure, in contrast to NS 100%.

### 5.5.2. *Types of Abstract*

The abstracts in the data can be classified into two types: informational and indicative. Informational abstracts consist of both IND and NS (i.e. 2 IND and 4 NS). Indicative abstracts only consist of 3 IND (III, IV, V).

### 5.5.3. *Paragraphing and Length*

Paragraphing and length vary considerably between IND and NS. Of the five IND papers, three are written in one paragraph, and of the four NS papers, two are also written in one paragraph. It seems that the principles of paragraph writing derived from Library Science and summarized by Graetz (1985) are not followed in this corpus. She states: “the abstract should not use separate paragraphs for the commonly recurring features of problem, summary, introduction, method, etc.

The length of paragraph also varies between IND and NS. The length ranges from 113 to 250 words. The following is a list of paragraph lengths:

IND	NS		
I	=	195	VI = 141
II	=	144	VII = 186
III	=	113	VIII = 197
IV	=	151	IX = 206
V	=	250	

#### 5.5.4. Tense Usage

Tense usage of both IND and NS can be seen in the following Table:

**Table 2:** Tense Usage in the Abstract Section

No. Of Paper	Simple Present	Simple Past	Present Perfect
I - IND	4	12	-
II - IND	8	2	-
III - IND	6	2	-
IV - IND	4	-	2
V - IND	13	-	-
VI - NS	4	4	-
VII - NS	6	3	1
VIII - NS	3	6	1
IX - NS	3	11	1

Both Day (1979) and Graetz (1985) propose that abstracts should be mostly in the past tense. From Table 2 we can see that 4-IND (II, III, IV, V) and 1-NS (VII) do not conform to the norm of tense usage in writing abstracts.

In general, both IND and NS writers use similar tenses such as present, past, and present perfect. We cannot expect to find a perfectly accurate English usage in the IND papers. For instance, IND authors find a problem in using tenses: which tense to use or when to shift (see 5.2. Rhetorical and Tense Shifts). This is understandable, as their first language (i.e. Indonesian) does not contain verb tenses.

#### References

- Day, R.A. (1979), *How to write and Publish a Scientific Paper*. Philadelphia: ISI Press.
- Graetz, N. Teaching EFL Students to Extract Structural Information from Abstracts in Ulijn, J.M. and Pugh A.K. Eds. (1985) *Reading for Professional Purposes*. Lenven Allo.
- Gutkowski, J. & Urquhart, A.H. (1989), *The Structure of Genetic Abstracts*. Plymouth: Marjons College of H.E.
- Hutchins, J., *On the Surface of Discourse*. London: George Allen and Unwin.
- Lackstrom, J. Selinker, L. and Trimble, L. (1973), *Technical Rhetorical Principles and Grammatical Choice*. TESOL Quarterly 7, 2: 127-136.

- Packam, G. et al (1985), *Studying in Australia: Writing Assignments*. Melbourne: Thomas Nelson Australia.
- Stapleton, P. (1987), *Writing research Papers: an Easy guide for Non-Native English Speakers*. Canberra: Australian Centre for International Agricultural Research.
- Swan, M. (1980), *Practical English Usage*. Oxford: OUP and ELBS.
- Swales, J. (1981), *Aspects of Article Introductions*. (Aston Research Reports, No. 1). Birmingham: University of Aston.
- Swales, J. (1985), *A Genre-Based Approach to Language Across the Curriculum*. Paper presented at the RELC Conference, Singapore.
- Weissberg, R. & Buker, S. (1990), *Writing Up Research: Experimental Research Report Writing for Students of English*. New Jersey: Prentice Hall Regents.

## **Appendix**

### **I-IND**

Fifty three elderly living in an institution were examined for their physical, nutrition, and mental condition. The reason, stated in the entry form, of sending them to the institution were very poor economic condition. All of them claimed that they are happier living in the institution than in their previous 'home ages were between 58 to 87 years old. Based on their weight, none of them overweight, in fact the women were limb or lightly underweight. Their complaints among others were itchinness, rheumatism and vision complaint.

The examination revealed that their personal hygiene is fairly adequately taken care of. Diseases found are rheumatism, cataract lentis, hypertension, pruritis senelis, early symptoms of decompesatio cordis, exzema, genito-urinary disorder and hernia. Half of them were anemic.

A sub sample of 30 elderly were interviewed for their mental condition. All men showed abnormality of some degree, while in women half of them had the problem. Impairment in social functioning due to mental disorders seems to be another reason which bought them to the home for the aged.

### **II-IND**

A three components study to investigate the impacts of the broad range of biological, social and economic factors on infant and child feeding and to determine the nature of their contribution to infant-child nutrition was carried out in Semarang, the capital of Central Java Province, Indonesia in 1982-1983. The components were ethnographic studies, a cross sectional survey an a marketing study on infant food and infant formula. Extended breastfeeding of high daily frequency is generally practised. Feeding patterns are breastfeeding and food supplement and some combination of breast, bottle and foods. Colostrum I not highly valued and prelacteal feeding ii common. Early introduction of solid I widely practised. Family income, birth attendant and working outside are three important determinants. Marketing of infant formula and infant food to mothers is channeled through health providers and product availability is widespread with competition on price.

### **III-IND**

Fishery is one of the major sectors in agriculture in Indonesia. Brackish-water pond is considered a marine, small scale fishery. The people who live in the coastal areas such as the North coast of Java Island and the coast of South Sulawesi. The paper gives a description of the brackish-water ponds, their location, operation, and development. It was only after the fourth decade of the twentieth century an especially after the Second World War that there were more brackish-water ponds. The social and economic aspects of brackish-water pond operation as well as the ecological aspects are also discussed.

#### **IV-IND**

Central Java, one of the 27 provinces in Indonesia, has a densely populated coastal area. Culture and capture fisheries are economic base in the region. Low revenue is obtained from traditionally managed brackish-water pond operations and hence intensive polyculture of milkfish and shrimp is being encouraged. Although smallholder operations had not been successful due to the poor quality of juveniles, high mortality rates and complicated management practices, improvements in these sector could increase productions. Modern technology has increased the output in sea fishery operations but catch per boat and per fisherman is declining. This can be partially attributed to over exploitation and mismanagement of fishing areas. The effect of the environmental quality of the coastal area and the economic problem in the region influences the human development of the community. The coastal zone can be developed through proper resources policy management, population growth control and application of appropriate technology.

#### **V-IND**

The problems of an increasing population and agricultural land restriction cause a limitation in the ability to produce enough food supplies. Man must find resources to solve the problems of an inadequate nutrition. The sea forms one of the natural resources where there is still hope in overcoming the nutrition problem. For this reason, coastal areas are a main focus for human activities. The increasing population density in coastal areas cause an increasing interdependence between man and the coastal environments the north coast of Central Java is Indonesia.

#### **VI-NS**

The purpose of this study was to determine experimentally the effectiveness of correcting intermediate ESL students' composition errors in a systematic and somewhat selective manner versus using a total correction approach. Furthermore, the study attempted to identify and examine the different types and frequencies of global and local errors (Burt and Kiparsky, 1972) that the students produced on their picture story composition.

No statistical significance was found, regardless of students' communicative ability, in the reduction of their global and local error correction treatments. The author discusses various interpretations of the study's results, and suggests a number of recommendations for refining methods to conduct further research on error correction. A systematic analysis of the types and frequencies of written global and local errors is discussed and illustrated with examples of the highest frequencies of suberror types.

#### **VII-NS**

The effectiveness of a smoking prevention program-incorporated within a traditional science curriculum-was assessed in terms of attitude modification in such categories as health, peer pressure, and social image as related to smoking. The study indicates the most relevant attitudes, the emotionally intense in particular, are modifiable in the desired direction, although the changes are small. Some gender differences in the recorded changes suggest a difference in the dynamics of the response to smoking intervention between male and female high school students. A desired change of attitude frequency distributions (e.g. from less extreme to more extreme responses) has also been found. In addition, the tendency of the experimental students to actively act against smoking within family circles increased, although not significantly. All the above was accompanied by a decrease in the number of smokers in the experimental group and a significant increase in the number of smokers in the control group. These results suggest that it is educationally possible to modify attitudes in health education in the desired direction by means of a properly designed interdisciplinary science curricular unit implemented within ongoing traditional science teaching.

### VIII-NS

The present investigation is a confirmation and extension of the idea that visual pigments adapted to the quality of their own bioluminescence have evolved in certain deep water marine fishes. In this case a single fish (*Malacosteus danae*) of the family malacosteidae, known to have red-emitting photophores, was trawled up in daylight from the Pacific off the coast of Southern California. Retinal extractions were found to contain two photopigments with absorbance maxima, one at 556 nm, the second at 514 nm. From the spectral positions of the oximes formed by bleaching in the presence of hydroxylamine it was inferred that the 556-pigment is an Az-pigment and the 514-pigment, an az pigment. Evidence was also obtained from the effect of the hydroxylamine on the unbleached extract of the possible presence of a photopigment that was bleached by the daylight when the fish was brought to the surface. This pigment, also identified as an Az-component from the oxime spectrum, could have been a moiety of the 514-photopigment but the possibility of the third visual pigment in the retina of this fish cannot be discounted except for this hydroxylamine effect the results are in agreement with published data from *Aristostomias scintillans*.

### IX-NS

Previous field studies have recorded yearly variations in fecundity of 40-60% in similar sized plaice, and an experiment was conducted to investigate whether these changes could be generated, in the laboratory, by feeding plaice different levels of ration. One group of plaice was fed at a rate of about 2-2.3% of wet body weight per day, and a second group was fed initially 0.5% and later 1.8% per day. The experiment lasted for a period of 406 days.

Of those fed on the lower ration, 39% produced no granular oocytes, whereas all fish on the higher ration produced granular oocytes. A comparison between the two groups, of those which did produce granular oocytes, found that the better-fed fish had 59% more granular oocytes, but the differences were less pronounced for the smaller, mature fish. Number of resting oocytes are also recorded.

The results suggest that food level can significantly affect fecundity, and also revealed a new mechanism for regulation of fecundity in the plaice. The lack of granular oocytes was not due to atresia, but to an early decision not to proceed with gonad development, whether this is of practical significance for the population of plaice in the wild is not yet established.