

Evaluating the effectiveness of a cross-disciplinary genre-focused writing intervention

A B S T R A C T In tertiary education settings it is imperative for students to move confidently between the academic discourses of a variety of disciplines. Thus, it is merited to aim writing interventions at genres that straddle disciplinary boundaries. Following a survey on preferred genres and text types at the University of Pretoria an essay-writing intervention for second-year undergraduate students was designed and developed. The effectiveness of the intervention was evaluated using a pretest-posttest design. On average the scores of the respondents improved by 7%. The largest improvement was on structure and development (15%), followed by the use of source materials (10%) and academic writing style (7%). An interpretation of the findings, combined with feedback from the respondents, suggested that extensive writing should be introduced soon after the commencement of an essay-writing intervention, and that a series of shorter teaching and learning cycles might be more effective than a single cycle. Furthermore, study units dealing with making and supporting claims might focus more strongly on learning from models than on explicit teaching of a variety of disciplinary conventions and preferences.

Keywords: academic essay; academic writing, applied linguistics; cross-disciplinary; genre approach; language teaching

1. Introduction

It is imperative for undergraduate students, especially those who are registered for programmes in the Humanities and Social Sciences, to move confidently between the discourses of a number of academic disciplines. They need to ‘control a range of genres appropriate to each setting, and to handle the meanings and identities that each evokes’ (Hyland, 2009:129). Thus, according to Bruce (2008:34) there has been a movement away from discipline-based English for Specific Purposes (ESP) course designs and methodology to a more ‘discourse and genre-based cross

disciplinary approach'. This trend, combined with the reality of undergraduate students being generally underprepared to engage in academic discourses (Johns, 1995, 2002; Lillis, 2001; Hyland, 2004; Carstens, 2008b) suggested a need for a writing intervention at undergraduate level.

This article reports on the evaluation of a 14-week essay-writing module designed for students of the Humanities and Social Sciences. The main purpose of the evaluation was to measure the effect of the intervention through comparison of their pre- and post-intervention performance. The intervention is briefly described, followed by an overview of the research methodology for the evaluation, and an interpretation of the results.

2. Overview of the intervention

In 2009 a new second-year academic writing module, UAL 210 Writing Academic Essays, was instituted in the Faculty of Humanities at the University of Pretoria, following suggestions made by an external review panel to extend academic literacy courses beyond the first year of study. The approval was aided by the outcomes of a survey on frequently required genres and text types (compare Carstens, 2008a). However, as a result of limited time to market the module (final approval by Senate was only granted in the fourth quarter of 2008), combined with the fact that the module was an elective that did not yet appear in the faculty year book, only 14 students registered. Eleven of them completed the course. The attrition rate of 21% can be accounted for as follows: One of the students was an international exchange student from Germany who only attended seven weeks of the 14 week course; one indicated that she was interested only in political analysis, and that the content of the module was not entirely suited to her needs; and the third discontinued the module in the third week because of a too heavy workload. The profiles of the 11 students who completed the module are summarised in Table 1 below.

Table 1: Socio-demographic profile of the participants

Respondent	Race	Gender	Mother tongue	Academic focus
1	White	Female	Afrikaans	English Studies
2	Black	Female	IsiZulu	Political Sciences
3	White	Male	English	English Studies
4	White	Male	Afrikaans	Philosophy
5	White	Female	English	Journalism
6	White	Male	Afrikaans	Philosophy
7	Black	Female	Portuguese	Sociology
8	Black	Female	Setswana	Political Sciences
9	Black	Female	IsiZulu	Political Sciences
10	Black	Female	Setswana	History
11	Black	Female	Sepedi	Economics and Business Sciences

The intervention (two 50-minute contact sessions per week) commenced in February 2009. The first author was responsible for designing the syllabus and all the materials as well as teaching the module. From a pedagogical perspective the syllabus was framed upon the Teaching Learning Cycle of the Australian genre school, which comprises the following phases: exploration, joint construction, independent construction, and critical reflection (compare Cope & Kalantzis, 1993, 2000). Theoretically, the cycle combines Halliday's view of what is involved in language learning (Halliday, 1978) with Vygotsky's (1978) sociocultural model of learning, embodied in his Zone of Proximal Development. Despite being genre-focused, the syllabus also integrates elements from other 'discourses' in language pedagogy, such as the process approach and elements of critical literacies approaches (Weideman, 2007; Carstens, 2008b).

Course materials consisted of a 100-page study guide and workbook, based on the following syllabus:

Study unit 1: Academic discourse(s)

The generic features of academic discourse are discussed with reference to authentic texts, followed by the study of texts from specific disciplines in the Humanities and Social Sciences in order to emphasise the need for mastering the characteristic features of disciplinary discourses.

Themes

- What is academic discourse?
- Is there only one academic discourse?

Study unit 2: Modes of writing (text types)

The mastery of rhetorical modes is practised during a cycle comprising the exploration of excerpts from authentic academic texts, freewriting, explicit teaching of the lexicogrammatical features that characterise each mode, identification of frequently used modes, and independent writing of paragraphs or short essays.

Themes

- Chronological writing: narratives, recounts and processes
- Description
- Comparison and contrast
- Cause and effect
- Exposition
- Analysis

Study unit 3: Academic arguments: formulating claims

Examples of essays are analysed to identify the types of claims contained in thesis statements. Students also formulate their own claims on the basis of given topics.

Themes

- Fact and opinion
- What is a claim/thesis?
- Positioning of the main thesis of an essay
- Types of claims (factual; causal; evaluative; recommendations)

Study unit 4: Academic arguments: invoking evidence

Examples of essays are analysed to identify types of support and types of evidence, focusing on lexicogrammatical markers.

Themes

- Types of support (comparison; definition; well-chosen examples; statistics; appeals to audience needs; appeals to authority; addressing a counterargument)
- Using appropriate types of support for different types of claims

Study unit 5: The structure of academic essays

Students analyse model essays and identify the characteristic features of the three main parts of the essay;

they compare good and poor examples of essays in terms of the wave-like structuring of information (as underpinned by the notions of Theme/macroTheme/hyperTheme and New/macroNew/hyperNew in Systemic Functional Grammar)

Themes

- The three-part structure of academic essays (introduction, body, conclusion)
- Developing an essay: waves of information (essay level; paragraph level; sentence and clause level)

Study unit 6: Engaging with other voices

Since an essay is essentially a debate between the author and other authors students need to learn how to frame their own claims as a response to what others before them have said. Students are presented with excerpts from scholarly articles in order to identify the lexicogrammatical strategies that experts use to verbalise stance and engagement.

Themes

- Conveying standard views
- Allowing others to speak (reporting; probabilising)
- Letting your own voice be heard (agreeing; disagreeing; proclaiming)

Study unit 7: The writing process: composing your own academic essay from A-Z

Students plan, write and revise their own essays independent from the lecturer, and critically reflect on their own work.

Themes

- Planning (analysing the essay prompt; generating ideas; doing research; outlining)
- Two cycles of writing and review (writing the first draft; peer review and feedback; correction; lecturer review and feedback; correction; submission of final version)
- Critical reflection on process and product

Each study unit comprised a set of outcomes and a learning component containing theory, model texts and a variety of authentic task types, some of which were completed collaboratively in class, and some as homework tasks for marks.

Assessment was structured and weighted in accordance with faculty regulations. The semester mark (progress mark) was based on continuous assessment of written homework tasks submitted and marked throughout the semester, and the exam mark, each carrying a weight of 50%.

A partially interactive website was developed using a customised version of the Blackboard system (known as ClickUP at the University of Pretoria). The site contained administrative information about the lecturer, the content and assessment criteria as well as a calendar with important dates. Apart from a link to the library various scholarly articles (for which copyright clearance was obtained) were made available on the overarching theme selected for the essays, *viz. Poverty in Africa*. The Discussion Tool allowed students to interact with one another on matters of common interest, and the Announcement Tool was used to alert students to important dates and events on the calendar. Additional class notes and the list of topics for the final examination were uploaded to folders on the home page of the module.

3. Quantitative evaluation

3.1 Method

All students enrolled for the module had to write a pretest and a posttest. The pretest assumed the format of a 50-minute in-class essay during the second week of the module. In order not to advantage or disadvantage any student a 'subject-neutral' topic was chosen, *viz. Causes*

and effects of poverty in Africa. All participants received a reader a week in advance, and were requested to prepare for the pretest essay. They were allowed to use the reader as an in-class resource. The pretest did not count towards the students' final marks, as they had not received any tuition on essay-writing at that point. Before writing the pretest consent was obtained to use unattributed extracts from participants' essays as well as the analytic scores awarded by the raters.

The posttest comprised the summative evaluation of the module. The students were allowed to choose from a list of topics on various issues relating to poverty in Africa, which had been requested from the relevant academic departments. Students were given one month in which to prepare for the essay exam. The planning, literature search, literature review, outlining, writing and reviewing had to be done without assistance by the lecturer in order to determine whether the scaffolding introduced throughout the module had equipped them to apply the linguistic and structural principles they had acquired. Table 2 lists the topics that were chosen by the students:

Table 2: Essay topics chosen by students

Topic (and description)	Subject-field	No. of students
To what extent was poverty an inevitable by-product of European colonialism in Africa?	History	1
Whose obligation is it to do something about poverty in society: the rich or the poor?	Philosophy	2
Whose obligation is it to do something about the moral problem of poverty: the poor or the government?	Philosophy	1
Analyse the poem 'London' by William Blake (in the <i>Norton Anthology of Poetry</i>) OR 'An abandoned bundle' by Oswald Mtshali (in the <i>Paperbook of South African Poetry</i>) paying close attention to the way the poem depicts both physical and spiritual poverty.	English literature	1
Discuss how Boesman and Lena are dehumanised by poverty and racial discrimination in Athol Fugard's <i>Boesman and Lena</i> . Refer closely to the text throughout your discussion.	English literature	3
The policy gap and poverty.	Political Sciences	1
Evaluate the United Nations' Millennium Development Goals (MDGs) as a global strategy to arrest poverty, by referring to the MDGs' normative as well as practical contribution to the plight of the poor.	Economics	1
Famine and hunger are often associated with poverty. How can this be combated through policy initiatives?	Sociology	1

The exam was taken in the Computer-based Testing Laboratory of the Informatorium on campus. Students were allowed to bring into the venue a sheet of paper with five citations, not exceeding 100 words, which they could use in their essays. This concession was made to facilitate the assessment of their ability to engage with other authors. Students had to use the

2003 version of *Microsoft Word*, since not all of them were familiar with the 2007 version. The spell- and grammar-checker was disabled.

The assessment instrument was a scoring rubric comprising 15 items. The values were defined as percentage ranges to assist the assessors in conceptualising each mark in terms of a benchmark that would resonate with generally conceived achievement levels:

7 = 85-100%	6 = 75-84%	5 = 65-74%	4 = 50-64%	3 = 36-49%	2 = 26-35%	1 = 0-25%
Excellent	Very good	Good	Average	Below average	Poor	Very poor

A 'Not applicable' (NA) option was included for items that might not be relevant for a particular assessment.

Seven-point scales were used for 14 of the items, while the 15th had to be rated on a two-point scale. The rationale for rating 'Legibility and layout' on a two-point scale was to obtain a cumulative score of 100. Items 16 and 17, the 'Total' and the 'Overall percentage', were only numbered for statistical purposes. Items 1-15 were clustered into four dimensions: 'Use of source material', 'Structure and development', 'Academic writing style', and 'Editing'. Three empirically based and internationally accredited analytic rating scales contributed input for the instrument: the *TOEFL writing scoring guide*; the *Scoring profile* of Jacobs *et al.* 1981 (cited by Weigle, 2002:113-115); and the *Masus rating sheet* of Bonanno and Jones (2007:2, 13). The scale was not intended to be overtly genre-based, since the purpose of the intervention was not to teach students a particular pedagogical approach, but to assist them in learning how to write academic essays. Table 3 is a reproduction of the scoring instrument.

Table 3: Analytic scoring rubric for the assessment of academic essays

USE OF SOURCE MATERIAL									
1.	Relevance of source data	7	6	5	4	3	2	1	NA
2.	Integration of source data with text	7	6	5	4	3	2	1	NA
3.	Stance and engagement	7	6	5	4	3	2	1	NA
STRUCTURE AND DEVELOPMENT									
4.	Thesis statement: clarity and focus	7	6	5	4	3	2	1	NA
5.	Development of main argument	7	6	5	4	3	2	1	NA
6.	Conclusion	7	6	5	4	3	2	1	NA
7.	Paragraph development	7	6	5	4	3	2	1	NA
ACADEMIC WRITING STYLE									
8.	Syntax: phrase and clause structure, sentence length	7	6	5	4	3	2	1	NA
9.	Concord and tense	7	6	5	4	3	2	1	NA
10.	Linking devices	7	6	5	4	3	2	1	NA
11.	Technical and subtechnical lexis	7	6	5	4	3	2	1	NA
12.	Style (formality; rhetorical mode)	7	6	5	4	3	2	1	NA

EDITING									
13.	Spelling, capitalisation and punctuation	7	6	5	4	3	2	1	NA
14.	Referencing technique	7	6	5	4	3	2	1	NA
15.	Legibility and layout	good 2			poor 0			NA	
16.	Total								
17.	Overall percentage								

The pre- and the posttest essays were scored independently by the course designer and presenter (Rater 1), and a part-time lecturer with a doctorate in Applied Linguistics from a reputable South African university as well as more than 20 years experience in teaching English and academic literacy (Rater 2).

Rater 1 scored students higher than Rater 2 on both the pretests and the posttests: on average the pretests were scored 3.4% higher by Rater 1 than by Rater 2, and the posttests were scored 2.4% higher by Rater 1 than by Rater 2. The correlation coefficients of the scores of the two raters are 0.96 for the pretest and 0.97 for the posttest, therefore warranting the use of the average of the two raters' scores as a measure of each student's performance.

After the rating process had been completed the two raters discussed their experience with scoring the essays. The second rater suggested that the formulation of certain items should be adapted with a view to future rating exercises, first because the relative weight of certain items was regarded to be either too high or too low, and second, to explain and clarify the scope of particular items, especially in cases where the rater may not be familiar with the terminology of applied linguistics:

- Items 1 and 2 should be combined into one item 'Use of source material', because of the difficulty to make a clear distinction between 'Relevance of source data' and 'Integration of source material'. Because of the second rater's uncertainty as to the scope of these items, as well as his relative unfamiliarity with the sources that the students had used, he tended to award an average score of 4 on items 1 and 2.
- Item 5 'Development of main argument' should be explained by means of bracketed information such as '(coherence and logic)'.
- Item 9 'Concord and tense' may be weighted too heavily, and its scope could be extended to 'Use of verbs'.
- For essays in the humanities item 11 'Technical and subtechnical lexis' may not be entirely relevant, first because certain subject-fields do not have what one may call a distinctive nomenclature, and second because the use of subtechnical lexis overlaps with item 12 'Style'. (Academic vocabulary may be seen as part of academic writing style.)

3.2 Presentation and discussion of results

The total score for each of the 11 respondents was converted to a percentage for ease of interpretation (compare Figure 1):

The average improvement of the 11 respondents was 10%. With the exception of a single student – whose posttest score was only 2 per cent less than her pretest score – all the students showed progress, with the largest improvement being 21%.

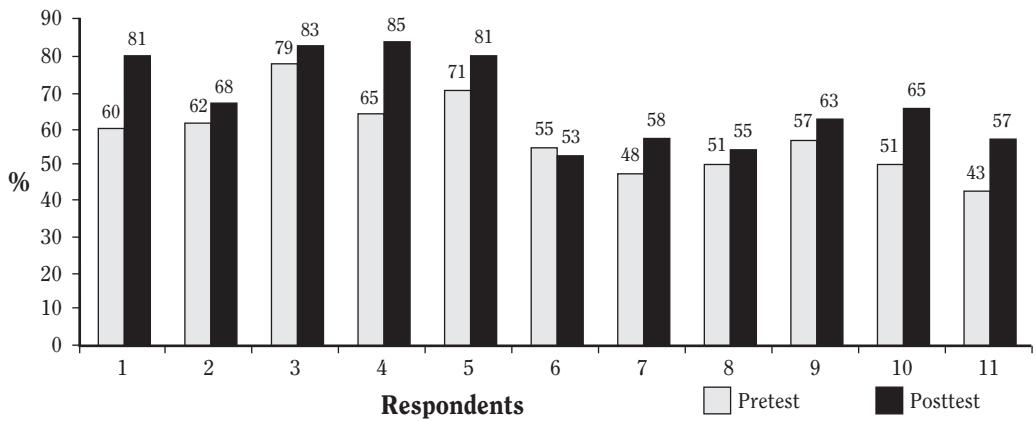


Figure 1: Comparison of pre- and posttest results per respondent

Figure 2 displays the average results per item after conversion to percentages:

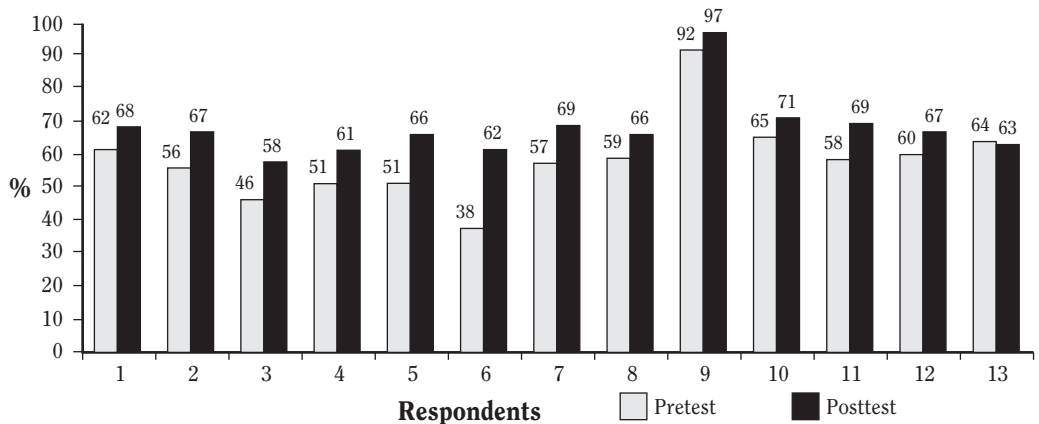


Figure 2: Comparison of pre- and posttest results per item

Per item, all the posttest ratings were higher than the pretest ratings, except item 13, which was 1% lower. For item 6, the improvement was 24%, while the improvement was between 10% and 15% on a further six items (items 2, 3, 4, 5, 7 and 11). On the remaining five items the improvement was more than 5%.

On the three primary dimensions of the analytic scoring instrument the improvement varied between 7% and -1%: Table 4 shows the mean improvement on the four primary dimensions of the instrument.

The Wilcoxon signed-rank test (SPSS version 17; Williams, Sweeney, & Anderson, 2009:764-770) was used to assess if the differences between the pre- and posttest ratings on each of the 13 questions comprising the instrument were significant. The Wilcoxon signed-rank test is a non-parametric test that is suitable for the analysis of small samples, as in the present case. The test indicates the probability of a significant difference between pre- and posttest ratings, and is appropriate for comparing data from the same participants – in this case the pre- and posttests written by each of the respondents who participated in the intervention.

Table 4: Improvement of students' output between the pre- and the posttest

Dimension	Mean: pretest	Mean: posttest	Improvement
Use of source materials (Items 1-3)	54%	64%	10%
Structure and development (Items 4-7)	49%	64%	15%
Academic writing style (Items 8-12)	67%	74%	7%
Editing (Item 13)	64%	63%	-1%

The results presented in Figure 2 should be interpreted against the probability values obtained from the Wilcoxon signed-rank test on each of the 13 items, which are represented in Table 5. One-sided probability values (p-values) are reported since the researcher departed from the hypothesis that the intervention would improve students' skills, resulting in higher essay ratings. P-values lower than 0.05 indicate that there is a significant improvement from the pre- to the posttest ratings at the 5% level of significance:

Table 5: One-sided p-values of the pre- and posttest ratings for the 13 items on the intervention, obtained from the Wilcoxon signed-rank test

Item	p-value
1	0,0860
2	0,0175
3	0,0155
4	0,0755
5	0,0155
6	0,0025
7	0,0130
8	0,0230
9	0,0105
10	0,0795
11	0,0130
12	0,0645
13	0,3205
*16	0,0020

*Item 16 was included as it shows the average improvement on all 13 items.

Overall, based on the total difference between the pretest and posttest scores (item 16), the improvement is significant, with a p-value much smaller than 0.05. Item 13, the only item on which students did not show an improvement on average, obviously does not have a significant p-value. For the remainder of the items, the improvement between the pre- and posttest ratings is significant at the 5% level, with the exception of items 1, 4, 10 and 12, which are significant at the 10% level. A larger sample might have resulted in significant improvement at the 5% level for these two questions as well.

4. Conclusion and recommendations

According to the results obtained from the evaluation students definitely benefited from the intervention. However, the improvement was not equal on the four dimensions measured by the analytic pre- and posttest assessment: On the dimension 'Handling of source materials' the

average improvement was 10%, on 'Structure and development' students improved by 15%, on 'Academic writing style' there was 7% improvement, and 'Editing' showed 1% decline. The most plausible explanation for the fact that the improvement on the use of source materials was moderate (or less than expected), may be that students did not study the content of the sources in depth (in other words they did not 'read to learn' as they would have done when studying for their academic subjects) and thus they may have been less motivated to engage with sources on the topic prescribed by the course designer. Also, they did not necessarily consult the same sources for the pretest and the posttest, and thus did not become familiar with core resources. A possible reason for the slight improvement on academic writing style is that the respondents were already fairly proficient academic writers when they entered the course (67% on average, as shown in Table 4). Furthermore, the intervention did not pay specific attention to grammar, and neither was style explicitly taught, except for brief pointers on issues of formality. It was encouraging that a significant improvement occurred on the dimension 'Structure and development', which seems to prove that discourse structure can be successfully taught and learned via templates and model texts. Both stronger and weaker students were able to grasp basic structural principles and successfully apply them.

An important question that arises from the research is how to convert the results into strategies for revision of the syllabus and materials. Since students showed the most significant gains on the dimension of 'Structure and development', it could be assumed that the intervention was effective in this area of academic writing. On the other hand, the intervention had only a moderate effect on students' use of lexis and grammar. As has been suggested before, they probably needed less intervention in this area, but at least some of the students could benefit from some assistance. Students' responses during a feedback session at the conclusion of the module supported the first author's contention that extensive writing should be introduced earlier in the intervention. It was observed that students only became convinced of the implications of their lexicogrammatical, stylistic and structural choices after having written a full essay, which was after the 10th week of the 14 week intervention. A concrete way of implementing this suggestion is to divide the syllabus into a series of shorter teaching and learning cycles, instead of one long cycle stretching from the beginning to the end of the intervention. Thus, cycles of exploration, joint construction and independent construction should be introduced for each of the components of essay-writing addressed in the intervention: using rhetorical modes, making and supporting claims, developing themes and subthemes, facilitating cohesion, and mastering stance and engagement. Self-, peer and lecturer assessment during each cycle should then be focused on the focal skill or ability within the context of a full essay.

Another adjustment that could be made to the syllabus is the simplification of theory in certain study units, for instance, on types of claims and types of support. The course designer had included a fair extent of detail in order to cater for variation across disciplines, but students did not seem to internalise all this information. They learned more from interacting with scholarly sources from their subject-fields and from essay-examples than from the detailed instruction and semi-decontextualised exercises. Thus it seems that a cross-disciplinary intervention should not attempt to account for and facilitate learning on the whole range of variation that occurs within its ambit.

Concerning materials design and development the importance of authenticity was clearly demonstrated. The researcher relied heavily on exemplars in writing manuals published in the US and the UK (for example Barnet, 2008; Oregon State University, 1997; Richlin-Klonsky & Strenski, 1994; Rosnow & Rosnow, 1998; Schmidt, 2005), and although some of the essays were good overall examples, not all of them were exemplary in terms of every aspect of the syllabus. In order to address these deficits future interventions could draw on essays written by local students who have successfully completed the intervention. Good examples could serve as model texts, whereas poorer attempts could be used to practise editing.

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