

MEASUREMENTS AND PERCEPTIONS OF WRITING DEVELOPMENT: OMANI ACADEMIC WRITERS IN ENGLISH

Ewen Arnold

University of Leeds, U. K.

Abstract

Using collaborative research methodology, this study reports on the writing development of a number of Omani teachers of English studying for a UK BA degree in Oman. It identifies the most useful criteria for measuring writing development, critiquing some previous measures. The measurements with the students' own perceptions of their development as writers were compared and the two ways of tracking writing development were evaluated. The discussion deals with some of the problems of interpreting data in the light of experience and background knowledge. It analyses some findings concerning the relationship between grammatical complexity and accuracy, and highlights the importance of affective factors in academic writing skills development.

Keywords: Collaborative research methodology; Grammatical complexity; Grammatical accuracy; Affective factors; Academic writing skills development.

INTRODUCTION

In 1999 the English Language Curriculum Department (ELCD) of the Ministry of Education in Oman started upgrading the qualifications of primary and intermediate English teachers in the Sultanate from a teaching college diploma to a B.A. Education (TESOL) degree from the University of Leeds. The first cohort of students began in 1999 and graduated in 2003. Subsequently three more cohorts have completed the programme and a further two are due to finish before January 2009.

Teachers on the three year course studied for the degree on day release while teaching in their schools four days a week, as well as in intensive summer and winter schools. Consequently, the teachers faced a demanding course of study, having to produce written work to deal with the

demands of more than ten 3,000-word assignments, a 6,000-word dissertation, and six examinations. Despite these demands, the majority of candidates have received honours degrees and a few have achieved outstanding results.

IMPACT OF THE PROJECT

In 2003 the ELCD commissioned a series of impact studies to examine the wider effects of the B.A. programme. These were carried out by teams of B.A. graduates assisted by regional tutors and Leeds tutors. These teams looked at topics such as the changes in teachers' theories and the ways in which headteachers perceived the impact of the project on their schools.

The writing skills team consisted of the six authors - a group of ex-B.A. students (Anwar, Jasim, Nasra, and Shamsa) and their tutors (Ewen, based in Oman as a regional tutor) and John (based in the U.K. as a Leeds tutor). All four B.A. graduates had obtained upper second class degrees on the programme. Not only did we as a team learn from each other in our roles as informants and researchers, but the collaborative nature of the research methodology offered a wider perspective into writing development.

DEVELOPING AS ACADEMIC WRITERS

It is not easy to learn the norms of the British academic discourse community (Braine, 2002) and all new undergraduates find this difficult, even when working in their mother tongue. For the Omani English teachers on the B.A. this was a serious challenge, because, although many had some fluency in spoken English, they had never read from academic sources such as journals and had never written essays of 3,000 words in any language. And although various aspects of writing skills development have been researched, ranging from general discussions of the kinds of methodologies which best support this development (Belcher & Braine, 1995; Kroll, 1990), to specific aspects of this development such as the use of citations (Dong, 1996), there seems not to have been any comparison of quantitatively-measured writing skills improvement with the writers' own perceptions of that improvement, and certainly none involving some of the writers themselves as researchers.

The programme explicitly supported this writing development, beginning with a two week pre-session course aimed at familiarising teachers with academic writing, note-taking, listening to lectures and taking part in discussions. Additionally, there were two compulsory language modules and other modules which dealt with other aspects of learning to write academic texts. Nonetheless, the standards which teachers had to meet

were those of a B.A. degree in the U.K. This meant a very steep learning curve for most.

Two research questions were formulated:

- (1) In what ways did BA students develop as academic writers?
- (2) What were the perceptions of the BA students with regard to their own writing development?

The writing skills development of BA students was measured and aspects of writing development as a lived experience were uncovered

MEASUREMENTS OF WRITING DEVELOPMENT

In measuring writing development, four criteria were employed: fluency, grammatical complexity, lexical complexity and accuracy. As a researcher, I was very grateful for the useful meta-study of published writing skills development studies carried out by Wolfe-Quintero, Inagaki, & Kim (1998) at the University of Hawaii.

As writers become more proficient they write more easily, they are relaxed and they write more in a given time (fluency). Grammar also develops as sentences become more complex with more subordination, and a wider range of tenses and aspects used, etc., (grammatical complexity). Lexis also becomes more complex, with a greater variety of vocabulary and the use of less frequent lexical items (lexical complexity). At the same time the number of errors is reduced (accuracy).

The most direct measurement of fluency would be to measure the time taken to write a certain amount of text, but this was not possible in the circumstances. We therefore measured the Words per T-unit (W/T), and Words in Error-Free T-units per Error-Free T-unit (WE/EFT). The T-unit is taken as the basic measure of language, rather than the sentence since it is a good measure of writing development (Wolfe-Quintero. et al., 1998, p. 32) and removes the problem of long sentences being produced by simple co-ordination. Using WE/EFT allows us to take into account the fact that words per T-unit might increase but only at the cost of a larger number of errors. (ibid. p. 56)

The most useful measures of grammatical complexity were the number of Clauses per T-unit (C/T) and the number of Dependent Clauses per T-unit (DC/T) (ibid. p. 34).

To measure lexical complexity, this study chose to use the Word Type to Token ration (WT/T), where WT means the number of word types and T

is the total number of words (tokens). This study also decided to use Lexical Word Types divided by T-units (LWT/T).

The accuracy measures chosen were Errors per T-unit (E/T) and Error-Free T-units per T-unit (EFT/T).

This gave us eight measures in all, two for each of the four criteria as shown in the table below.

TABLE 1
 Quantitative Measures of Writing Skills Development

Measure No	Meaning	How measured
<i>Fluency</i>		
1	Number of words (tokens) divided by number of T-units	WT
2	Number of words in error-free T-units divided by number of error-free T-units	WE/EFT
<i>Grammatical Complexity</i>		
3	Number of clauses divided by number of T-units	C/T
4	Number of dependent clauses divided by number of T-units	DC/T
<i>Lexical Complexity</i>		
5	Number of word types divided by number of T-units	WT/T
6	Number of lexical word types divided by number of T-units	LWT/T
<i>Accuracy</i>		
7	Number of error-free T-units divided by number of T-units	EFT/T
8	Number of errors divided by number of T-units	E/T

Any improvement in writing skills would result in an increase in all measures except the last (E/T). For this reason, when we present data later in the article this ratio will be inverted (T/E). All of these criteria seemed valid measures of writing skills development according to Wolfe-Quintero et al. (1998), and seemed relatively simple to apply when we started.

MEASURING WRITING SKILLS DEVELOPMENT

The four criteria above were measured by taking the first assignment on the B.A. programme, written three months after starting the programme, and the final assignment, handed in three years later, as document samples. (See Appendices 1 and 2 for extracts.) We analyzed the first 1,000 words coming immediately after the assignment introductions for each assignment. We took ten teachers as our subject sample – five who had achieved upper

second class degrees (group 1) and five who had lower seconds or thirds in the B.A. (group 2).

However, actually making the measurements was quite problematic in several respects. Firstly, what exactly to count as words (tokens) was not easy since, for example, the assignments often contained quotes, which varied in length. If we had counted long quotes as part of the student's writing, it might have biased the writing in favour of complexity and accuracy. We therefore only counted quotes that were embedded within a sentence using the student's own words. Quotes of a sentence or more were not counted in the 1,000 words for the purposes of analysis.

To take another example, it was difficult to agree how long a T-unit was, especially when the writing contained grammatical errors. Often this involved making decisions as to the writer's intentions, which were sometimes unclear.

Another problem was in identifying errors. Measuring Error-Free T-units was not too difficult, since all we did was note the existence of errors. However, counting the number of errors (for E/T – measure 8) proved difficult since even the two native speakers disagreed at times on what constituted an error or how to count them. Furthermore, we had little guidance from the literature. Many researchers referred to by Wolfe-Quintero et al. (1998) 'didn't specify what constituted an error in their studies' (ibid. p. 36). Given these difficulties, we discussed individual cases in detail as a group and developed a checklist of what constituted an error in our study, so at least we were able to guarantee some consistency, even if the criteria themselves were largely intuitive.

RESULTS OF THE QUANTITATIVE DATA GATHERING

The main results are given in the following tables.

TABLE 2
 Measures of writing development for Alia

<u>Measure</u>	<u>Alia first assignment</u>	<u>Alia last assignment</u>	<u>% change</u>	<u>Difference</u>
Fluency				
W/T	13.2	14.9	+13%	↑
WE/EFT	11.2	11.4	+2%	=
Grammatical Complexity				
C/T	1.34	1.49	+11%	↑
DC/T	0.33	0.49	+48%	↑
Lexical Complexity				
WT/T	4.5	5.9	+25%	↑
LWT/T	3.9	5.0	+24%	↑
Accuracy				
EFT/T	0.63	0.32	-49%	↓
T/E	1.96	0.93	-54%	↑
	Ave % change		+3%	=

Table 2 shows the results for one student (Alia – all names are pseudonyms). The arrows in the difference column show whether there was an improvement or not. If the percentage change was less than 10%, an equals sign (=) was used.

Overall, Alia seems to have improved as a writer in some aspects but not others. She has become slightly more fluent, writing more words per T-unit. She wrote more grammatically complex text, writing more clauses per T-unit and more dependent clauses per T-unit. She also wrote more lexically complex text. However, she became less accurate, decreasing on both accuracy measures. So, for example, in Appendix, 2 we can see significant grammatical complexity in lines 3-5 and 11-13, as well as examples of low frequency lexis, e.g. *evaluation*, *performed*, and *provision*. However, there are several different kinds of error. Appendix 1, although more accurate, contains fewer subordinate clauses and less low frequency lexis. (Both Appendices are from Alia's assignments, and used with her permission.)

We compiled similar tables for all ten students who took part in our research. The results are summarized in Table 3.

TABLE 3
Percentage changes in each of the measurements for each student

Name	Fluency		Grammatical complexity		Lexical complexity		Accuracy		Ave
	WT	WE/EFT	C/T	DC/T	WT/T	LWT/T	EFT/T	T/E	
Group 1									
Ali	+42	+5	+29	+112	+41	+41	+19	+19	+39
Alia	+13	+2	+11	+48	+25	+24	-49	-54	+3
Badr	0	+36	+42	+226	-5	-2	-31	-6	+33
Bakr	+57	+82	+20	+52	+51	+53	+58	+163	+67
Nour	+17	-27	+34	+159	+27	+25	-12	-34	+24
Group 2									
Ahmed	+15	+22	-8	-22	+66	+70	+87	+27	+32
Hind	-14	-1	-11	-37	-12	-7	-9	+82	+1
Laila	+47	+34	+23	+59	+40	+39	+33	+45	+40
Maha	-5	-34	+5	+16	-12	-14	0	+37	-2
Muna	+2	+5	0	-3	-11	-16	-4	+36	+1
Ave									

Overall, there seems to have been a general improvement in writing skills, with improvements in 49 measures, and only 19 declining. (The difference column shows six students improving and four staying roughly the same.) Three students (Ali, Bakr and Laila) improved on all eight measures. Only one student (Hind) declined on a large number of measures (seven out of eight), although her average percentage change showed little change (+1%).

However, this general improvement was not across the board. Most students became more fluent writers. Most also wrote more grammatically complex text with three students showing a very large increase in grammatical complexity (sometimes >100%). Figures for lexical complexity also increased. For accuracy the results were more mixed with all of group 2 seeming to write more accurately (as measured by EFT/T) but with three group 1 members becoming less accurate.

Figures 1 and 2 summarize the changes over a period of three years. It seems strange that some students, such as Hind, Maha and Muna, showed relatively little change over this period, despite the criteria themselves becoming stricter as the demands on the students increased.

Looking at the data more closely, some tendencies emerge. For example, no students became both less grammatically complex writers and less accurate writers. All three students who wrote less accurately wrote

more grammatically complex text. All three who wrote less grammatically complex text became more accurate. There seems therefore to be an inverse relationship between grammatical complexity and accuracy.

'THEMES' FROM THE INTERVIEWS

All ten research subjects were interviewed in English by an Omani team member. We adopted a semi-structured interview, which was audio taped, and focussed on analysis of an assignment and recall of how the writing took place. We used copies of the same assignments that were used for the quantitative measurements. Both the interviewer and interviewee read the two assignments in detail before the interview, and the assignments were used as evidence during the discussion, thus grounding the interviews in the assignments. Unfortunately, most (6/10) of the interviews were conducted before completion of quantitative analysis of the data, which did not allow deeper exploration of the reasons for the quantitative findings. After the interviews the team met to identify 'themes' which emerged from the data. The main themes are discussed below.

All interviewees thought their writing skills had improved during the BA course. However, many found the writing process rather 'daunting' and 'intimidating' (their words) at first, with the word 'fear' or its near synonyms used frequently. The fears themselves were varied, including fear of making mistakes, of changing the meaning when paraphrasing, of the marks and failure, and of what others might think if they did fail. Students reported not knowing where to start or what to do, with many of them believing that there was *one right answer* to the assignment question. Their whole approach to the task changed over time. Some students reported relying less on their tutor and deciding on their own interpretation of the question, trying to find a 'gap' or a niche, and/or organizing ideas under headings rather than starting from the introduction and writing one section after another in a linear fashion.

Some students reported improvements in the organization of their assignments, with better use of headings and linking devices. Others talked about the way they supported points and developed arguments, using less direct quotes and more paraphrase in later assignments. In early assignments, students tended to write the assignment and then search for appropriate quotes, which they often put at the end of a paragraph 'like a piece of decoration' as one student put it. They went 'from reading to find quotes to reading to understand the topic', as another student explained. All of this shows an increasing ownership of the writing process, captured in this quote from Halima

Now I have the ability to use the appropriate quotes ... to link the ideas to each other, to take the writer's ideas and paraphrase them in my own words, and give my own opinion. Also I have the ability to use ... the academic language.

Another interviewee (Ali) said, 'I can give my own ideas, own views, providing of course that they are genuine, they make sense and reflect the learning and teaching process in our schools'. This new voice, as the quote shows, comes from a depth of thought prompted by the BA programme as a whole not just from writing assignments. As this speaker says, it is difficult to separate writing improvement from overall improvement. Furthermore, alongside the development of writing skills per se, students reported improvements in proofreading and editing skills, and the ability to collect, analyse and present classroom data.

A number of comments touched on how and why the students developed as writers. Many interviewees discussed the importance of their tutor and the kind of support they gave. Others made a link between the reading on the programme, and their development as writers. One noteworthy theme was the role of 'imitation' with several students attempting to use stylistic features from their reading. Some students adopted other conscious strategies such as deliberately trying out new words in assignments, consciously structuring paragraphs in particular ways (e.g. problem-solution), or consciously creating topic sentences and structuring their writing around them. Sometimes the feedback from the markers lead writers to adopt strategies such as simplifying the language or shortening sentences.

DISCUSSIONS

The perceptions from insiders who were also researchers have enabled us to interpret and understand writing development more deeply than just using the traditional quantitative measures discussed above. For example, we were able to interpret the accuracy and complexity scores more insightfully using the perceptions of the developing writers themselves, as we demonstrate below.

As is often the case, the research resulted in more questions than the researchers started off with. Firstly, did all of the students improve their writing skills during the B.A. programme, as reported during the interviews, or not, as the quantitative results suggest? A general improvement would seem likely since, as discussed above, the criteria became more strict as the

programme developed and all students received considerable support and feedback during the programme. Therefore, how can we understand the quantitative results for some students who graduated? Are they just an artifact of the method or small sample size? Would different measures have given different results?

Secondly, how can we understand the relationship between changes in grammatical complexity and accuracy? One possible explanation lies in the different strategies adopted by different students. Some students consciously simplified their writing as a result of early feedback. Others adopted very different strategies, for example, Nour, who said, 'I started taking more risks with the language as I realized that markers were looking for original ideas. Similarly, Laila said, 'I suppose as I changed from direct quotes to using paraphrase and summary, I was increasing in complexity and also taking more risks, in order to put more voice into my writing.' Increased risk-taking could help explain why accuracy decreased for some writers as grammatical complexity increased.

Linked to this is the reported movement from dependence to independence, and towards ownership and engagement, with some students starting to develop their own academic voice, as their confidence increased and their fear lessened. There is research evidence that this kind of increasing ownership results in deeper, more focussed editing and proofreading (Henning, Mamiane & Phene, 2000). It would seem likely that it also results in better quality output as well.

Finally, although it seems intuitively obvious that 'learning to read academic text is a component of learning to write it' (Henning et al., 2000, p. 30), exactly how does this relationship work in individual learners? An answer to this and other questions raised by this study must await further research.

TEACHING IMPLICATIONS

Often teaching and learning academic writing skills seems to be treated as a simple cognitive process (one exception is Bereswill, 2005). However, if the research here is representative, writing tutors and others responsible need to deal with the affective factors such as fear (Johanson, 2005) and find ways of increasing learner's confidence, especially early in the programme. Voice and ownership too need to be cultivated. One suggestion is to encourage students to write their first draft freely without concern for accuracy, formality, etc, and then to go back and correct it, trying to keep their own words as far as possible. This technique should also help overcome anxiety (cf expressivist approaches in Hyland, 2002).

Academic writing skills teachers need to be aware of the strategies their writers are adopting and guide them so that, for example, in reducing errors, students do not stop trying to develop their lexical and grammatical skills. Another implication related to reducing errors concerns risk-taking. From the interviews it is clear that group 1 students, who performed better on the B.A. also took more risks with their writing. Writing tutors need to find ways of encouraging risk-taking that do not result in too many serious errors.

The Oman-based tutor involved in this research has made a conscious effort to use the data collected and the knowledge discovered from the research to support current students' writing development. For example, he has tried to encourage (controlled) 'imitation' of discourse features from the literature and has used samples of texts analysed by the research team to demonstrate, for example, the difference between quotes used 'as decoration' and quotes integrated into a paragraph and an argument. These tactics have prompted discussions in the team about whether there might be stages in writing skills development, and to what extent they are natural developmental processes which are difficult to hurry up. But these questions too must await further research!

THE AUTHOR

Ewen Arnold has worked as a teacher, teacher trainer, materials writer and manager in a variety of countries in Europe, Africa and Asia including Saudi Arabia, Oman, Germany, Ethiopia and Sri Lanka. He now works as a teacher at the British Council in Kandy, Sri Lanka. He has published articles on teaching, teacher training, materials writing and EFL management. His current interest is young learner teaching and teacher training.

REFERENCES

- Belcher, D. & G. Braine. (Eds.). (1995). *Academic writing in a second language: Essays on research and pedagogy*. New Jersey: Ablex.
- Bereswill, M. (2005). *Creativity and discipline: Academic writing as an experience of ambivalence*. Lecture at the VII International Summer School in Lifelong Learning, Roskilde University, August (2005), accessed at <http://www.kfn.de/roskcreativity.pdf> on 14 November (2005).
- Braine, G. (2002). Academic literacy and the non-native speaker graduate student. *Journal of English for Academic Purposes*, 1 (1), 59–68.

- Dong, Y. (1996). Learning how to use citations for knowledge transformation. *Research in the Teaching of English*, 30, 428-457.
- Henning, E, A. Mamiane, & M. PHEME. (2000). *Research methodology and writing composition: Two faces of emergent scholarship*. Research Report accessed at <http://www.nrf.ac.za/yenza/pdf/henning.PDF> on 16 March 2006.
- Hyland, K. (2002). Options of identity in academic writing. *ELT Journal*, 56 (4), 351-358.
- Johanson, R. (2005). *The self-reported perspectives regarding academic writing among Taiwanese graduate students specializing in TEFL*. Accessed at <http://studentorgs.utexas.edu/flesa/tpfle/contents2.doc> on 21 May 2006.
- Johnson, M. J. & F. Pajares. (1994). Confidence and competence in writing: The role of self efficacy, outcome expectancy, and apprehension. *Research in the Teaching of English*, 28, 313-331.
- Kroll, B. (Ed.). 1990. *Second language writing: Research insights for the classroom*. Cambridge: Cambridge University Press.
- Kuhnline, D. (n/d) *Voice* accessed at <http://gradeng.truman.edu/working/Voice%20Worksheet%20by%20Amy.doc> on 23 May (2006).
- Wolfe-Quintero, K., Inagaki, S., & Kim, H. Y. (1998). *Second language development in writing: Measures of fluency, accuracy, and complexity*. Honolulu, HI: University of Hawaii Press.

APPENDICES

Appendix 1 Sample from Alia's first assignment

Line no	Text
1	The characteristics of effective language practice
2	There are so many characteristics that should be focused on while
3	practicing the language. Some of these are :-
4	1. Clear situation/topic :-
5	This helps the pupils to identify where to use the appropriate language.
6	The teacher must set a clear situations for the pupils which is easy to
7	understand and they will probably face it in their real life. i.e. he must
8	put the children in the real life conditions to teach where to use such
9	language. For example, in a shop or how to make a kite. These topics train
10	the pupils to communicate with others outside. As <i>Burnfit et al (1991)</i> P. 19
11	explain "a sentence without a context is hard to understand". Also Scott and
12	Ytreberg (1990) P. 37 answer the question why to practise the language "to
13	train pupils to use correct, simple useful language within a situation or
14	context".
15	2. Clear purposes for children :-
16	Children must have a purpose for learning or doing some thing. Any
17	task having a valid purpose motivates them to learn more. This also helps
18	them to learn indirectly. The purpose might be enjoyment, communication,
19	challenge, coloring etc. <i>Burnfit et al (1991)</i> said that if the children have
20	a genuine purpose for their learning they will be interested in doing the
21	activity.

Appendix 2 Sample from Alia's last assignment

Line no	Text
1	Reid (1995:205) explains that evaluation usually occurs as a grade on
2	the final draft of a student's paper. It consists of comments, which justify a
3	judgment. This approach is commonly focused on the product. Ur (1991)
4	adds that 'assessment' appears when learners are informed about how well
5	or badly they have performed to an attempted answer. Hamp-Lyons and
6	Heasley (1987) argue the disadvantage of this way. They write that the last
7	judgment could be influenced by many factors such as teacher tiredness,
8	students are not interested in the topic, handwriting.
9	Another way of giving feedback is to 'respond' to the pupil's writing.
10	harmer (2001) suggests that we respond when we say how the text appears
11	and how it could be improved. Response or 'correction' as Ur (1991) calls
12	contains some specific information that is provided on aspects of learners'
13	performance through explanation or other alternative provision. Ur (1991)
14	concentrates on the correction feedback, which includes information about
15	what the learners did right as well as wrong. Responding to student writing
16	is an on going process. It consists of the writing process of generating ideas
17	and revising and starts when the student begins to write.