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THE INFLUENCE OF TUTORIALS ON THE IMPROVEMENT OF TERTIARY STUDENTS' ACADEMIC LITERACY

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This paper describes a study which explored whether attending tutorials facilitated by senior students improves tertiary students' marks in an academic literacy course. Data were drawn from the academic literacy test marks and essay assignment marks of students who took a yearlong academic literacy course at the University of Pretoria. A statistical analysis was done to determine whether there was any improvement in the test marks and the essay assignments of students who attended tutorials at least 10 times, in addition to regular lectures. Findings suggest that attending extra academic literacy tutorials has little effect on students' TALL (Test of Academic Literacy Levels) marks, but it does seem to have an influence on students' writing ability. Because of the number of problems encountered in doing the research, it also illustrates the complex and problematic nature of research into language performance.

kevwords

academic literacy; TALL; tutorials; student tutors; writing ability; at-risk students

INTRODUCTION

Many tertiary institutions use a tutorial system to supplement students' learning. In many cases, the tutorials are facilitated by students rather than lecturers. The University of Pretoria (UP) is no exception. At UP, tutors are generally third year, honours or master's students with a solid background in the subject in question.

Tutors can be used in many ways. One way is for them to have consultation hours, during which individual students with problems can come for help (usually for clarification of work). The tutors can also be used to run additional classes in the form of tutorials which can range in size from five to forty students. The recent change in the funding framework for universities places much greater emphasis on student throughput, and much less on mere enrolment, than was the case in the past (Council on Higher Education, 2004) at a time when universities are facing increasing student numbers and escalating costs (Misselhorn, 1997). It is now more important than ever for them to improve their throughput rates in a cost-effective manner. Given the

problems in the South African school system and the limited pool of applicants who obtain university access, identifying promising but "at-risk" students before they start their academic career and offering them appropriate support seems imperative. Using senior students instead of additional lecturers to provide additional intensive input in the form of tutorials could make this affordable as these senior students are paid less than additional lecturers.

At the University of Pretoria, all first-year students who are identified as at-risk by the TALL (Test for Academic Literacy Levels) have to complete a credit-bearing course, coded EOT 151-154. The research reported in this article set out to determine whether tutorials (in addition to normal lectures) led by senior students really do benefit first year students doing a generic year-long academic literacy course. The first phase of the research involved comparing at-risk students' post-test marks with their original marks for the TALL. In the second phase, the marks the students received for a final writing assignment was compared with the number of tutorials they attended.

SITUATING THE RESEARCH

Throughout the world, there are increasing numbers of students (both mother tongue and second language speakers) who are entering higher education without being sufficiently prepared for the demands of studying at a tertiary institution. Especially non-traditional students have often not acquired the necessary level of language proficiency to succeed in higher education (Warren, 2002), and 'still appear to be less empowered and more disabled' in higher education (Hutchings, 2006: 248). Non-traditional students can include students who speak English as an additional language, students who come from lower socio-economic groups, and students who belong to ethnic-minority communities (Warren, 2002). Since the end of Apartheid, the representation of such non-traditional students has increased exponentially in South Africa. In most South African universities, non-traditional students now outnumber traditional students (see, for example, Butler and Van Dyk, 2004).

The reasons are complex. Raphan and Moser (1994), for instance, explore inadequate reading, writing, listening and speaking skills as reasons for underachievement at higher education. Pretorius (1995), whose study was closely focused on reading, concludes that an inability to cope with the prescribed reading material and to produce the writing with the writing expected of them in assignments and examinations are important reasons why many students do not succeed in their undergraduate courses. Speakers of English as an additional language also often have difficulty with manipulating the forms of English 'in a way that will allow them to receive and pass on the thoughts developed in the disciplines' (Boughey, 2002:302). Many years before, Snow and Brinton (1988) made a similar point when they argued that students lack the ability to synthesise oral and written information, and are unable to express such information adequately in writing.

Faced with the problem of inadequate academic literacy levels, the South African Department of Education has emphasised that universities may under no circumstances lower their standards, but that academic development programmes should be used to redress the inequalities of the past that have led to vast numbers of underprepared students entering universities (Ministry of

Education, 2001). Even before this call, most South African tertiary institutions had in some way taken measures to meet the needs of an increasing number of students whose academic literacy levels are inadequate to cope with the demands of the tertiary environment. Such measures have included Supplemental Instruction (SI) groups (Collett & Davidson, 1997; Warren, 2002), foundation courses (Warren, 2002), generic academic literacy courses (Warren, 2002; Webb 2002), genre-specific academic literacy courses (e.g. Butler & Van Dyk, 2004) and writing centres (Leibowitz & Goodman 1997; Hutchings 2006). More than ten years ago, the University of the Western Cape, for example, was providing programmes that 'aimed at bridging the gap between the requirements of university studies and the resources the students bring with them (Mabizela, 1994: 25). Wide-ranging studies have been done into how to help students develop their writing skills, one notable example being Leibowitz and Mohamed (2000). Several universities (e.g. the University of Cape Town, the University of Stellenbosch, the University of the Western Cape, UNISA, and the University of the Witwatersrand) have established Writing Centres to address the challenge of inadequate student reading and writing skills. Although the purpose of these centres is generally not remedial, the inadequacy of students' academic literacy skills is certainly one of the main reasons why universities are willing to invest a lot of money in such interventions. Several of the above measures have been criticised for either labelling students, or for being ineffective since the measures are not sufficiently integrated into students' curricula (e.g. Thesen, 1997; Warren, 2002). Although this is an important discussion that needs to be explored further, it falls outside the limitations of this article.

The University of Pretoria's response to the significant gap between high school and university academic literacy was to create the Unit for Language Skills Development (ULSD)¹ in 1999 (Webb, 2002). The mission of this Unit is to support students' academic literacy by assessing their academic literacy and then 'designing and offering [them] courses that nurture and develop students' academic literacy' (Unit for Academic Literacy, 2007).

BACKGROUND TO THE STUDY

Recent studies have shown a significant link between students' literacy levels and performance in subjects where 'language skills' are not usually considered to be a crucial factor. In a recent study by Pretorius and Bohlmann (2003), for example, a relationship was found between the reading skills of mathematics access programme students' and their overall academic success. Similarly, van Rensburg (2003) observed that inadequate language proficiency was one of the factors influencing the high failure rate at UP. Since 2000, UP has been using tests to identify those students who are most at risk in terms of academic performance. The cut-off point of the test is determined historically each year, i.e. it is determined with reference to the test results of preceding years. The results of the same test at other universities that use it (Northwest and Stellenbosch) are fed into the decision-making process as well.

In the first two years, the test used was the ELSA (English Literacy Skills Assessment) Plus, a version of the commercially available ELSA test for use in higher education. The shortcomings of this test, which have been described in several publications (Weideman, 2003b; Weideman & Van Dyk, 2004a, 2004b), led to a decision that the unit should develop its own test, namely the TALL (Test of Academic Literacy Levels). This has been in use since and has been well received

(it has an average reliability rate of 0.91 across several versions). For security purposes, a new TALL is developed every year. The Northwest University and the University of Stellenbosch have become active partners in developing it.

UP students in the "at-risk" category are expected to attend two lectures a week in the academic literacy course, and have the option of adding a weekly tutorial session. The ULSD has been using a tutoring system for both consultation hours and tutorials since 2000. This study focuses exclusively on the tutorials, since they were much better attended than the consultation hours. It is important to note two things. First, going to the tutorials is not compulsory for EOT students, and secondly, tutorials do not aim at 'training' students for the TALL test or for the end-of-year assignment. Instead, the tutors create opportunities to explore in more detail the problems dealt with in the lectures, and to have more practice in using academic discourse.

Academic literacy has come to include numeric literacy, information literacy, etc. However, in this study Zamel's (1998: 187) definition of academic literacy as 'a specialised form of reading, writing, and thinking done in the "academy" is used. In the same vein, Collett (2002: 103) notes that:

The academic process is transacted through language and students with limited vocabulary and/or weaknesses in their ability to manipulate the structures of the language are unquestionably at a disadvantage. To put it another way: language is the most basic tool for building academic literacy.

Zamel (1998) argues that students have to appropriate a specialised discourse by mimicking the language used around them (in books, lectures, tutorials etc.). In fact, they have to learn to speak a new kind of language. This is of course very difficult if even the discourses they command (especially in a second language) are inadequate for 'normal' purposes. Zamel (1998) suggests that students can improve their academic literacy by being immersed in context-specific (i.e. academic) reading and writing, and by being provided the opportunity to inquire into this language, to raise questions about it, to examine it critically, and to actively construct knowledge.

Zamel (1998) also argues that teaching academic literacy should be a process of construction through interaction between teachers and students. It follows that a tutorial situation in which students have the opportunity to explore their own problems within a process of constructive interaction, has a better chance of success. As Eskey (1983: 322) noted many years ago already, it is vital to determine the students' need before beginning the process of construction.

We cannot simply assume that our students will acquire everything that they need to acquire 'naturally', although, of course, we know that a few of them will. (...). Even in this age of facilitating learning, humanistic interacting, and coexisting with error, giving students what they need is still what good teaching is all about.

RESEARCH QUESTION

The key question that the current study raises is whether only lecturers (with relevant postgraduate qualifications) can 'teach' students academic literacy, or whether students'

academic literacy can also be improved through interaction with a senior student (in the case of the University of Pretoria, a tutor). These senior students, who are at least in their third year, all have demonstrated competence in the academic discourse they have been a part of for two or more years, but usually do not have a language teaching qualification. If Zamel (1998) is correct in arguing that students acquire academic literacy mainly by mimicking the language used around them, then it seems reasonable to argue that attending academic literacy tutorials and engaging in academic discourse with these senior students could significantly influence students' academic literacy skills. To explore the research question, this study examines whether attending tutorials improves, firstly, students' test scores in a standardised academic literacy test, and secondly, their writing ability.

THE DATA

Data gathering was done in two phases. In the first phase, the data were taken from the 2004 TALL results. The test was administered at the beginning of the 2004 academic year to determine which students should be required to take the academic literacy (then coded EOT 151-154) courses. The test was administered again at the end of the 2004 academic year to the students who were identified as at-risk, and who were obliged to take the academic literacy intervention courses (cf. Weideman, 2003a). The TALL consists of both multiple-choice questions and a writing section. However, due to the large number of students, this writing section is marked only in borderline cases (i.e. students who very narrowly miss the test score necessary to be considered 'not at-risk'), and then usually only for students who query their test results.

In the second phase, data were taken from a major writing assignment that the students had to hand in at the end of the year for the EOT 151-154 course. This assignment had to conform to all of the usual requirements for academic assignments; that is, it had to be thoroughly researched, referenced appropriately, and be well-written in terms of both mechanics (i.e. spelling, grammar etc.) as well as global features (i.e. appropriately structured paragraphs, having a solid argument that flows logically etc.). This assignment was aimed at testing all of the skills (specifically in terms of writing) that students had acquired during the year in the EOT course. The assignment was taken from the students' course book (*Academic Literacy: Prepare to Learn*), and was marked by the lecturers themselves. It was unfortunately not moderated – thus one weakness of this research is that individual lecturers could have influenced the final results of the assignments. One could argue that this is a 'real world' reflection of academic performance since performance is closely tied to assessment by individual lecturers.

Students did have the opportunity of taking drafts of their assignments to the tutors during consultation hours, but this was not compulsory, and therefore it was not taken into account for the purposes of this research.

THE RESULTS TALL results

During the first phase of this research, the TALL test results for the beginning of 2004 were compared to the TALL test results at the end of 2004. Only the results of students who were

identified as at-risk, and who consequently had to complete the EOT courses, were taken into account for this study. The results of 1184 at-risk students were obtained from the TALL administered at the beginning of the year. The test results of 1193 students were obtained from the TALL administered at the end of the year. These results were then correlated to find matching students. A research sample of 800 students was thus identified. Reasons that matches could not be found for all of the students include the following:

- 1) Some students wrote the TALL at the beginning of the year and were identified as at-risk, but never took the academic literacy courses.
- 2) Some new students did not write the TALL at the beginning of the year. They nevertheless completed the academic literacy courses, and therefore only wrote the TALL at the end of the year.
- 3) Students who were repeating academic literacy courses did not write the 2004 TALL at the beginning of the year again, but did write the test at the end of the year.
- 4) Some of the student numbers on the TALL answer sheets had been incorrectly recorded.

The improvement in the scores of the 800 students in the research sample between the TALL results at the beginning of the year and the TALL results at the end of the year was then determined.

Students complete an attendance register each time they attend a tutorial. It was therefore possible to place the students into categories according to the number of tutorials they had attended during the year. The number of times a student attended tutorials was compared to the degree of improvement of that student. Two main categories of students were distinguished and used in this research, namely students who attended no tutorials at all, and students who attended 10 or more tutorials. A statistical comparison was then made to determine whether students who attended tutorials regularly (10 times or more) did indeed improve more over the year (with reference to their test scores) than students who did not attend tutorials at all. Out of the sample of 800 students, 513 students fell into one of the two categories used for this research, namely students who attended no tutorials at all, and students who attended 10 or more tutorials.

Assignment marks

In the second phase of the research, a further comparison was made between the number of tutorials that students attended, and the marks in a major writing assignment that these students had to complete at the end of the year. This was done because the tutorials mainly focus on writing ability. I felt that that an improvement in the students' writing ability would possibly not be reflected in their test scores, since the test consists mainly of multiple choice questions.

The same two categories were scrutinised, namely those students who attended 10 tutorials or more, and those students who attended no tutorials at all. 33 students attended 10 tutorials or more, whereas 480 students did not attend any tutorials. The rest of the students attended between one and nine tutorials, and were discarded. Of the 513 students, only 113 results (24 who attended 10 tutorials or more; 89 who attended no tutorials at all) were used.

The students whose results were not used were discarded for one of the following reasons:

- 1) Not all of the lecturers set the same final writing assignment, and only seven out of the 15 lecturers used the final writing assignment I was interested in. Students from faculties such as Engineering or Medical Sciences did other writing tasks. A few lecturers also opted for other writing tasks.
- 2) Not all lecturers submitted marks for the writing assignment.
- 3) The results of students who obtained 0 for this writing task were discarded, since there is no way of determining whether this was indeed due to performance, or whether the students did not hand in the assignment.
- 4) It seems that the recordkeeping was not accurate since certain students were not on the class list of the relevant lecturer.

RESULTS AND STATISTICAL ANALYSIS

TALL scores

The results of the first phase of the research show that although there was a significant improvement in TALL scores between the test done at admission (pre-test) and the test done at the end of the year (post test), the tutorials do not seem to have influenced this improvement significantly. The students who attended ten or more tutorials (n=33) improved (between the pre-test and post test results) by an average of 18.3%. The students who attended no tutorials at all (n=480) improved by an average of 18.2%.

When only the 113 students who were used in the second phase of this research (i.e. when comparing the writing task marks with the number of tutorials attended) are compared, the results are as follows. The students (n=89) who attended no tutorials at all improved (between the pretest and the post test) by an average of 16.4%. The students who attended 10 tutorials or more (n=24) improved by 19.4%.

On the Pearson Correlation Coefficient, the correlation between the students' improvement in both groups (between the pre-test and the post test) and tutorials attended is 0.13949, and the P-value is 0.1406. Clearly, this is a very low correlation, and since the probability value should be under 0.05 for whatever improvement there was to be considered non-incidental, it is clear that the 3% difference between the two groups (regarding the pre-test and post test scores) cannot be considered meaningful.

Assignment marks

Since the tutorials focus mainly on writing skills (giving attention to aspects such as: writing sentences, writing paragraphs, writing essays, connecting ideas with logical connectors or conjunctions, and writing bibliographies), and because the multiple choice format of TALL does not necessarily test writing competence, I thought it useful to look at a major writing assignment that students had to hand in at the end of the year.

These results presented a more positive view of the role of tutorials. Students who attended 10 tutorials (n=24) or more obtained an average of 71.3% for the final writing task while the students who attended no tutorials (n=89) obtained an average of 56.3% for the final writing task (a difference of 15%).

On the Pearson Correlation Coefficient, the correlation coefficient between the tutorials attended and the writing task is 0.41354. The P-value is <.0001. The correlation coefficient is positive, but not very high. However, with a P-value of <.0001, it is significant. Thus the 15% difference in the writing task marks between students who attended 10 or more tutorials, and students who attended no tutorials at all, seems to be significant. In sum, even though attending the tutorials does not have any significant influence on the improvement in the TALL scores, it does seem to have a significant effect on the students' writing ability. Several factors have to be kept in mind, however.

Unlike the TALL results, the results of the writing task could have been influenced by several variables. Firstly, those students who did attend 10 or more tutorials might have done so because their motivation was higher to begin with, and they were more willing to learn. Secondly, because this writing task was not moderated, it is not possible to say that the marking was consistent. Thirdly, not all lecturers encouraged their students in equal measure to attend tutorials. Further analysis of variables (ANOVA) allows us to assess the significance of lecturer variation and tutorial attendance.

Table 1: Analysis of variables (ANOVA)

Variable	Mean Square	P-value
Lecturer	3.26	0.0022
Tutorials	5.35	0.0078

As can be seen in Table 1, the probability that lecturer variation was a factor in the difference in the average marks of the two groups in the writing task is indeed significant (P-value = 0.0022). However, in spite of this variable, the probability that the tutorials attended positively influenced students' writing marks is still significant, and well below the required P-value of 0.05.

CONCLUSION

Attending tutorials does not seem to have had a significant influence on students' improved performance on the standardised academic literacy test, the TALL. However, it does seem to have had an effect on improving students' academic writing in ways not registered by the TALL. This suggests that an academic literacy test consisting of multiple choice questions might not be able to reveal students' ability to use academic discourse in writing. Paxton (2000: 110-114) has raised similar concerns when saying that multiple choice tests 'fail to test either critical or communicative skills' since they 'do not require students to generate the language and produce an idea, but rather to select the right answer and write down a number'. This is potentially highly problematic if one takes into consideration the importance of being able to synthesise information, or express such information in writing in an academic context (Snow & Brinton,

1988). In the 'authentic' academic world, students are required to produce language and ideas, not just understand them. If the academic literacy skills evident in students' performance in extended written assignments are not reflected adequately in their results in a standardised multiple choice test of academic literacy, the value of such a test as an indicator of academic literacy levels must be limited. The value could be augmented either by giving more weight to the extended writing produced alongside the multiple choice questions in tests like the TALL, or by using such a standardised test in conjunction with some form of written assignment. While it is true that the extended writing is much more work-intensive in terms of marking, the possible advantages are worth pursuing.

Academic literacy development is, of course, not the preserve of the academic literacy classroom. For example, mere exposure to an academic environment (contact with academics, lectures, books etc.) also contributes to students developing academic literacy. Tutorials and consultations in individual subjects may be even more significant. Nevertheless, the results of this research seem to indicate that specific focused academic literacy interventions (for example, additional tutorials) can positively influence students' writing abilities, and so have significant consequences for student success beyond academic literacy courses. That possibility invites further research which takes other variables into account. One possible variable is attendance of lectures. One would need to monitor students' lecture attendance, as well as their tutorial attendance, to determine whether frequency of attendance of lectures was a factor. Further research should also be done to see whether certain tutors' students obtain higher final marks than others. Salient factors might be the qualifications and/or personality of a tutor which could have an influence on a student's motivation, and consequently on his/her improvement. Related research might explore why some students do not attend tutorials regularly. A final example is a more complex line of inquiry into whether different learning styles or strategies affect the rate at which students learn and the degree to which they apply what they have learnt when they are taught in a specific way.

If participation in tutorials led by senior students does indeed improve students' academic writing ability (as this study suggests), it is a cost-effective supplement to normal lectures. It that is the case, research aimed at optimising the system seems imperative. This would involve determining the kind of training tutors need and designing effective and appropriate materials to be used in tutorials. At the heart of the enterprise, as Eskey (1983: 322) suggests, would be to 'give students what they need'.

ENDNOTE

¹ The Unit for Language Skills Development (ULSD) was renamed the Unit for Academic Literacy (UAL) in 2006. However, in this study, it is referred to as the ULSD since this is what it was called at the time of this research.

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