Abstract
This paper describes an English-language application developed within an educational system undergoing radical change. Since the mid-1990s, South African education has moved from a dual system favouring one privileged class, to one that embraces integration and equality. This move has been complex and fraught with the difficulties inherent in incorporating disadvantaged pupils from multilingual backgrounds into previously-‘advantaged’ classrooms with English as principle medium of tuition. In order to cope with widely-varying student needs, an interactive computer-based application has been created to enable students to diagnose their own specific weaknesses and to provide personalised assistance in overcoming them. Results demonstrate that the system is highly effective in improving students’ performance, establishing a closer sense of personal attention, and in alleviating the pedagogical stresses experienced by instructors in an extremely demanding educational environment.

Introduction
Since the mid-1990s, South African education has moved from a dual system of education that favoured one privileged class to one that embraces integration and equality. This move has been a complex one, fraught with the difficulties inherent in incorporating disadvantaged pupils from multilingual backgrounds into previously-‘advantaged’ classrooms in which English is the principle medium of tuition. While educationalists and politicians produced and debated the principles, policies and philosophies underlying the new system, both secondary and tertiary teachers were practically faced with having to teach huge classes and to provide individualised remediation to students of often greatly varied ability.

Although most schools offer special English tuition programmes for these students, these few hours per week have proved inadequate to meet the ongoing linguistic demands of their ‘standard’ classes; furthermore, most teachers, despite their best intentions, are on the one hand not qualified ESOL practitioners, and on the other, hard pressed to complete already full syllabi. Despite their best efforts, already-disadvantaged students fall further behind, become resentful of a system that seems to place them on the defensive, and the problem is exacerbated. A further consideration is that, while students need English language skills to participate meaningfully in the learning environment, many fail to understand how niceties such as correct grammar and sentence structure may contribute to their ability to succeed and be competitive in academic or professional arenas. Consequently, little class time is devoted to remediation of these rather politically sensitive communication requirements. At the same time, many instructors feel a responsibility to provide means of achieving some degree of excellence to those students who wanted to strive for it.

English College
English College is a computer-based self-help application designed by secondary and tertiary teaching staff to address the most pressing perceived problems experienced by NESB students with regard to fluent, correct written communication in English. After consultation with students at the University of Stellenbosch and Simons Town High School (both in South Africa), it was decided to address problems in the following areas:

- Rules of Concord (verb-noun agreement)
- Sentences, Clauses and Phrases
- Sentence types (Simple, Compound and Complex)
- The Apostrophe
- The use of the Comma
- Parts of speech

It is worth noting in passing that struggling students themselves prioritised these areas, particularly in the light of long-standing international trends away from the inclusion of grammar in teaching curricula.

The design brief was to:
1. Identify individual students’ problem areas
2. Devise a personalised remediation program
3. Ensure competence in the areas identified
4. Provide students with the means of asking for ‘human’ intervention where necessary
5. Provide a teacher module, which would facilitate tracking of student progress.

The User Interface:
A further requirement was to create a user interface with which students could identify. Since using the application was voluntary, students needed to ‘feel like’ doing the test and engaging with the subsequent tutorials.
Over the years a range of strategies has been employed to this end, with the programme requiring constant updating to maintain its contemporary feel. Currently targeted are elements from SMS (phone text messaging) and cartoons (with, for example, speech bubbles instead of the standard ‘text book’ instruction format).

In addition, students needed to be able to contact their instructor/tutor with specific questions about the programme, or with questions about any of the rules or examples that they might encounter. In order for the instructor to be able to provide appropriate assistance, he/she needed to be able to identify immediately the precise location in the course from which the student sent the question, so that he/she could assess the problem first-hand.

Programme Structure

English College comprises an ‘umbrella’ diagnostic test which students complete by simply pointing and clicking – no written responses are required – for already-disadvantaged students, it was considered important not to introduce distracters such as typing/spelling errors at this stage. At the end of the diagnostic test, the student is presented with an itemised report, identifying his or her problem areas, and offering the option of either beginning the remedial lessons immediately, or of quitting and returning later. The student’s location is recorded, so that (s)he can quit at any time, and return to the same place later.

If a student encounters a problem at any stage while using the application, he/she can click on the question mark icon, and be presented with the following (which can be personalised by the instructor):

The teacher then receives an email and (optionally) an SMS text message on his/her mobile phone, identifying the student, exactly where in the course (or test) the student is, and giving the text of the SOS message. The remedial lessons comprise self-contained, dynamic and interactive tutorial modules containing practice exercises on each rule/feature as it is taught. A concluding test is given at the end of the lesson cycle, and if necessary, the remedial content is again modified to accommodate the needs of the student.

When all remedial cycles have been completed, the student is again given a (different) diagnostic test covering all grammar areas, and (if necessary) the process of remediation starts again.

Results:

Results over the past five years have been measured in three ways. Firstly, student progress through the programme has been monitored, with number of attempts and length of time taken on each module recorded. Secondly, a before-and-after sample of students’ work has been analysed each year, to identify whether success in the test translates into success in essays and assignments. Thirdly, students have been interviewed and their qualitative feedback noted and acted upon.

Students’ progress through the programme varies so widely that meaningful trends are not immediately discernible. A significant improvement in performance has, however, been clear. By definition, when a student completes a module, (s)he will have achieved a 95% competency, so the acid test was seen to be the results of the ‘before-and-after’ sample. Over 5 years, students’ error rate (for those who completed modules) has decreased by 85% on average, with the most impressive results (90% and 95%) being recorded for the concord and apostrophe modules.

A further satisfying outcome has been students’ feedback, provided in person, in the end-of-programme survey, or via the Notes function. This feedback reinforces existing studies that advocate the advantage to students of being able to pace themselves and manage their own progress, as well as of being able to repeat errors and learn from them without loss of face. In addition, while benefiting from the electronic patience of the computer, students also praised highly the facility for contacting their instructor… even when they did not make use of this function. On average only 20% of students used the Notes function, but 88% of the feedback received identified it as a positive feature of the programme. It seems that the notion of personal attention is in itself considered valuable in the overcrowded classroom contexts in which student frequently find themselves.

Conclusion

While success in a small grammar application may seem like a drop in an ocean when compared with the complex difficulties faced by disadvantaged NESB students within the South African education system, it is felt that providing students with a computer-mediated means of successfully mastering and controlling even one small area of their frequently demoralising educational experience is of value. It is also felt that the principle on which the programme is based could be extended to empower and encourage students in other subject areas where the playing fields (for whatever reason) are overcrowded and less than level.