

## 6 Future Work

### 6.1 Email

As was shown in section 4.2.E, very few students looked at the page *Useful Information* (see Table 4.2.e.1). Some students did not look at the page at all, as they went to the incorrect examination venue. The author had hoped that this page would act as a noticeboard for passing information to the students.

To make sure that **all** the students are informed of changes to the pages as well as class announcements, (and of course to promote discussions outside the practical period) an email listserver should be used. Up to now, the author has been wary of using email with undergraduate students because of its potential for misuse and the spread of viruses. Clarke (1998) has discussed the merits of email as a discussion tool amongst adult learners, but mentions that not all students participate equally (*ibid.*). The author (and others, *e.g.* Flanagan, 2000; Steyn, 2000) has found a similar lack of discussion from the bulk of the members of the GUIDE group of postgraduate Information Science students at the University of Pretoria. The author thus feels that if there is a lack of discussion amongst senior postgraduate students, first year students (who are mainly first time Internet users) will be even less inclined to make use of this medium for problem solving (this scenario has been documented by Draper, 1997 and Marsh, 2000). Email to the listserver will then devolve into one-way traffic, with the course presenter using it for administrative issues. The author had similar experiences with a group of prospective engineering students from the South African Airforce during the second half of 2000, in that they failed to use their listserver for anything other than administrative issues. Hart and Gilding (1997) found the same problem, but were happy to use the listserver for posting global notices to all the students.

Arnold (1997) found that students regarded participation in email discussion groups not as an aid to, or part of, the course, but rather as something extra.

### 6.2 Web Access Logs

The Apache Web Server logs yielded good information for this study (section 4.2), but it was extremely time consuming extracting this information. Unfortunately, only the IP address of the workstation was logged when each page was accessed. This gives no information as to the identity of the user of the pages. A more formal student login to the site may be required as the course is a credit bearing one at the University of Pretoria. A cross correlation between the Apache logs and the login logs could yield a far more precise measure of how each student used the Web pages.

The formal login could also help in shifting students' attitudes when they realise their progress is being monitored.

### **6.3 JavaLOGO**

Since 1995, the software *PC LOGO for Windows* (Terrapin, 2000) has been used for the course. This is a limitation, as the assignments can only be completed in the Gold Fields Computer Centre (which holds a multi-station license for *PC LOGO*), unless the student has a copy of this software. The author has looked at a very popular freeware version of LOGO, *MSWLogo* (Mills, 2000), but found the interface not as easy to work with as that of the commercial product from Terrapin.

Furthermore, for a student to be able to use this software on a machine on which it was not installed, s/he would have to download it from the Internet (and then install it). This was beyond the capabilities SCI152 students in 2000. However, in 2001, several students of their own accord, downloaded and used *MSWLogo* in completing their assignments.

In an attempt to make LOGO software available, which would not entail downloading or installation, a Java version of LOGO is being developed (Vermaak, P. 2000). Using *JavaLOGO* means that the student will be able to complete the assignments from any workstation, with a Java enabled browser, connected to the Internet.

A further advantage of developing *JavaLOGO* is that some of the Java classes can be incorporated directly into the tutorial pages to provide a modicum of CBT interactivity for the student.