ABSTRACT
The process by which students learn to program is a major issue in computer science educational research. Programming is a fundamental part of the computer science curriculum, but one which is often problematic. It seems to be difficult to find an effective method of teaching that is suitable for all students. In this research we tried to gain insights into ways of improving our teaching by a careful examination of students’ mistakes. The compiler errors that were generated by their programs together with the pattern that was observed in their debugging activities formed the basis of this research. We discovered that many students with a good understanding of programming do not acquire the skills to debug programs effectively, and this is a major impediment to their producing working code of any complexity. Skill at debugging seems to increase a programmer’s confidence and we suggest that more emphasis be placed on debugging skills in the teaching of programming.