Abstract

Learning software engineering in practical laboratory based on present curriculum is under the clutches of hard practices and not well defined. The effort and time taken for planning, designing and coding, have a few issues in student’s learning aspect. Same is the case for evaluating the student’s program. With the effect, both the teacher and students have leaned towards lightweight learning method using Extreme Programming (XP). Pair Programming, which is one among the twelve practices of XP has been widely used by the pedagogical community. However, this practice is found suitable for introductory level small-scale programs. Also, the researchers incorporating pair programming, have not given much importance for program assignments and program correction. To address these problems, we have developed a Generic software teaching and learning model called GSOFT with few software development practices, and pair programming. COSMIC FFP (Common Software Measurement Integration Consortium Full Function Point) standard was used for program assignments and program evaluation. This method was applied on real time project assigned to student as large scale programs and examined. For this study, the students were grouped into pair programmers (PP) and solo programmers (SP). The performance of the PP and SP groups were measured using our generic model and found the person-days taken to complete the program. The results show that PP used less person-day than the SP. This
study also proves that the program developed by PP has better coding.

References

- www.extremeprogramming.org.
- www.cosmicoa.com

Index Terms
Computer Science  Software Engineering

Keywords
Pair Programming  Extreme Programming  Software Measurement  COSMIC FFP
Cfsu
GSOFT
Person-days.