Teaching Object Technology in Industry Short Courses

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Keywords

Continuing Education, Curriculum, Short course, Object technology.

ABSTRACT

Practicing software professionals must regularly update their knowledge base to ensure they are using the most appropriate tools, technologies and methodologies for their particular applications and development environments. The transition from imperative to object-oriented programming and thinking has been seen as a particularly difficult transition in many organizations [1]. The use of objects for those unfamiliar with them often requires that one not only learn new programming languages and development tools, but also involves new methodologies and a new way of thinking about software (the infamous "paradigm shift"). Even those who are using objects often find themselves needing to use new tools, languages and methodologies as the field matures.

Most often this continuing education occurs through self-study and interaction with colleagues both formally and informally. Making time for self-study and informal interaction can be extremely difficult due to ever-present deadline and management pressures. Many industry practitioners seek out professional help via academic institutions, training companies and educational arms of vendor companies. Although the demand has made these options very popular [2], the traditional approaches of each of these tend to have various drawbacks. Academic institutions usually offer semester long courses which are part of a curriculum which culminates in a degree and often focus on concepts and theory as opposed to recent tools or technologies. Many institutions have adjusted the delivery of these courses to better suit the working professional by offering them evenings and weekends, via remote interactive video (distance learning), or now over the Internet [3]. Although many companies do offer tuition reimbursement programs, the coursework is usually done exclusively on the employee's personal time.

Consequently, many employees attend more intensive short courses that can be taken over a few days during regular working hours. These courses tend to be offered by educational companies or vendors teaching a particular product. One of the primary drawbacks to this type of training is that information tends to only travel in one direction. Students are rarely tested or asked to demonstrate a mastery of the course content.

This research proposes that short industry courses on various object technologies can be taught at academic institutions and that they can incorporate the strengths of the traditional graded academic course with some of the strengths of vendor provided courses. In particular it is proposed that short courses can be offered which provide information by engaging the students and requiring them to demonstrate their mastery of the skills being taught. Proposed curriculum, evaluation and student/employer interest are all being examined.

1. REFERENCES

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