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## Abstract

SCORM (Sharable Content Object Reference Model) is one of the international e-learning specifications, which provides sharable content, compatible run-time environment and learning profile. SCORM supported accessibility, adaptability, affordability, durability, interoperability and reusability. People can share their own learning content with each other and learn things on the Internet. SCORM learning content can run on the SCORM learning management system. However SCORM do not have a complete evaluation mechanism. The SP chart represents students and problems. It is a tool to analyze the relationship between students and their answers to In this paper, we integrate the SP chart into SCORM as a test problems. formative assessment and add course as the third dimension to strengthen SCORM assessment. The developed tool can be used for SCORM assessment in three perspectives: student-problem, course-problem, and student-course. So any test problem set and the student performance can be thoroughly examined. The tool was applied to a class and the empirical results are presented in this paper.

Keyword: SCORM, SP chart, SPC table, e-learning, formative assessment.