Abstract

At California Polytechnic State University, in the Construction Management Department there is a need for a lesson plan which teaches students the concept of earned value analysis as it applies to construction projects. As many construction management students from Cal Poly go into industry and take part in complex projects, it will be beneficial to understand project management tools such as earned value. Earned value analysis focuses on two critical components, time and money, and how they compare to each other and the original estimated values throughout the duration of a project. Comparing the estimated values to actual values during construction provides variables to calculate the schedule performance index and cost performance index. These indexes give an accurate estimate as to if the project is ahead or behind schedule and over or under budget. Understanding how to apply these calculations will allow graduates to make timely decisions in the field to keep projects on schedule and on budget.

Key Words: Earned Value, Cost Performance Index, Schedule Performance Index, Forecasting, Project Management Controls