

## **The Concurrent Engineering Method - The Necessity for the Convergence of Research and Education**

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### **Abstract**

The purpose of this study is to explore cases from industrial, academic, and educational perspectives, in which convergent thinking and competency development have determined product quality and competitiveness, and to publicize such cases in order to change the view of a specialist's role. To achieve this purpose, the concurrent engineering (CE) method is used as an example. Using this method, this study explores the importance of academic segmentation and convergence, and of the specialist's unique insight. This study thus contributes to the supply of labor, among which will be the future leaders of society. The CE method is dissected to assess the importance of the supply of academically convergent specialists. This study also reviews the past achievements of academically convergent specialists and explores innovative contributions made by individuals and companies. Talented individuals who have made historical achievements have two common characteristics: convergent thinking, different perspectives, and the ability to link these perspectives. Today's efforts towards convergence through the functional utilization of information technology (IT) can be termed as modular convergence. Thus, the emphasis by the CE model of engineering and commerce, on insights other than the philosophical analysis of socio-humanity and the specialist's role, are revealed as achievements of this study. Based on the CE modeling, this paper is expected to contribute to the awareness of the practical necessity of convergence and to fostering such convergence.

### **Keywords**

Industrial educational convergence, concurrent engineering, quality management