Technical education plays a significant role in providing middle level manpower needed for work in various industries for development and economic growth of every nation. There is the need for technical education to provide students with expertise to cope with the changing industrial demands in the present knowledge and technological economy. However, research has identified a significant gap between technical education and industries. For this reason the present teaching methods and the practices of technical education have been questioned. This article discusses and analyses the cognitive processes of novice and expert technicians in line with expertise development from the perspective of cognitive psychology. The intention is to describe and propose a model of technical expertise towards the identification of innovative teaching methods for the development of technical expertise in technical schools.