Recognizing the need to increase the talent pool of students pursuing careers in engineering and technology, there have been a host of programs initiated to meet this goal. Such programs have been initiated as part of the school curriculum and as extracurricular activities. Competitions at the local, State and national levels are receiving greater attention as a viable approach to enhancing teaching and learning through hands-on applications.

Engineering design competitions, that show engineering as a fun experience and applicable to their everyday experiences both in and outside the classroom, can be a learning and motivating experience for students and for coaches. This paper will review the nature of these competitions, and how they might impact on participants. Methods and possible resources for preparing participants and their coaches for the competition will also be reviewed. Strategies for using these experiences to motivate students and to integrate these experiences into secondary school science, math and technology courses will be hypothecated.