CHAPTER 10

CONCLUSIONS AND FURTHER RESEARCH

10.1 INTRODUCTION

The research reported in this thesis was carried out to investigate the implementation of six sigma concept in self-financing private non-autonomous engineering colleges in India. A literature review surmounting Six Sigma and quality improvement in engineering colleges was carried out and presented in chapter 2. The results of the literature review conducted in the beginning of this research indicated that, there was no research available in the literature for implementing six sigma concepts in engineering education.

10.2 PREPARING THE ORGANISATION FOR SS

Every organisation needs to be prepared to take up Six Sigma projects. Engineering colleges are no exceptions. In this regard, Six Sigma organisation was constructed with respect to self-financing private non-autonomous engineering colleges in India, and their roles and responsibilities have been well documented and presented in chapter 3. For effective realisation of six sigma effort in an organisation, training is essential to all levels of hierarchy in the organisation. The internal stakeholders like the Management, Principal, HODs, Dean and Directors and Faculty members of an engineering educational institution are trained.
10.3 DEVELOPMENT OF TFMEA

There are no tools available for identifying Six Sigma projects in engineering colleges. In order to overcome this deficiency during this doctoral work, the TFMEA model was constructed to identify the improvement areas.

10.4 DATA COLLECTION AND I-S MODEL

The student’s feedback survey conducted also helped understand their problems. Based on these efforts the vital areas of quality improvement were identified for the Indian engineering colleges.

10.5 EMPLOYABILITY AND ACADEMIC PERFORMANCE IMPROVEMENT

A few vital projects like employability improvement and academic performance improvements were also chosen and being implemented in engineering colleges. These outcomes revealed the prowess of the application of Six Sigma in Indian EEIs. The thesis is concluded by stating that, the Six Sigma programme will enable the contemporary EEIs to improve the educational standards to attain a world class performance level.

10.6 SCOPE FOR FUTURE RESEARCH

The results of the research carried out in the doctoral work academic and employability improvement were favourable in terms of the successful practical implementation of Six Sigma in engineering colleges. However, there were a few debacles identified during the pursuance of this doctoral work. First, due to the paucity of time and cost only self financing private non-autonomous engineering colleges were considered for studying
the applicability of six sigma methods. In India, apart from self financing private engineering colleges, there are other categories of engineering college namely IITs, NITs, Government Engineering Colleges, Government funded private engineering colleges, Universities, Deemed Universities, autonomous colleges and so on. The conduct of student’s feedback survey consumed an ample time for the application of further projects. Second, due to time constraint only a few six sigma projects like employment improvement and academic performance improvement were selected for consideration. The third limitation is that for a sustainable control and monitoring of six sigma success depends on how the engineering college uses the suggested ICT based module for students attendance and internal mark assessment process. The fourth one is the financial justification of each six sigma project to be evaluated. Despite these debacles, it is envisaged that the findings and contribution of this doctoral work would be helpful in the application of Six Sigma projects in various processes of self-financing private non-autonomous engineering colleges in India. Finally, a model which integrates Six Sigma, ISO 9001, NBA process, Lean and ICT can be developed for sustainable control and monitoring of six sigma success.