

Reflections on a Multi-disciplinary Toy Design Engineering Programme

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This paper describes the life cycle of a toy design engineering programme (Shiu, Chan and Morgan, 2010) and the lessons learned in developing and running such a programme. Some of these lessons may be applicable to other multi-disciplinary programmes.

Hong Kong is a global base for Original Equipment Manufacturing (OEM) and is in transition to Original Brand Manufacturing (ODM). However, local companies are not confident in their local staff for new product design (Nyaw and Yeung, 2001). The programme team developed a multi-disciplinary toy design engineering programme to cater for the needs of industry to produce “Renaissance Man” designers that are familiar with engineering technology and costing, engineers that are playful and design sensitive, or inventors that are original in designing novel toys.

The majority of the graduates were able to enter into the toy industry in 2007 and 2008. Student designs shone in toy competitions as well as product design competitions, with many designs reflecting mechanical or electronic sophistication not normally present in works of traditional design students. Some students were highly praised by employers to be industry-focused and all rounded. The programme stopped admitting new students in 2011, after the downturn in the toy industry due to toy safety issues in 2009, signified by the closure of Smart Union, a HKSE-listed toy company. Yet some of the lessons learned in the life cycle of the course may be similar to other multi-disciplinary courses or programmes (Pirrie *et. al.*, 1998).

The downside of this multi-disciplinary programme is that students may not be as good in drawing and aesthetic design as a traditional design student, and may not be as specialised in technical skills when compared to traditional mechanical engineering, electronic engineering, and manufacturing engineering students. Some employers actually preferred traditional engineers to multi-disciplinary toy design engineering graduates.

In the initial planning stage, the planning team was small and it was not possible to have sufficient members to cover the full spectrum of relevant disciplines, as the number of staff available was tied to the number of existing students. The number of staff eventually reached its steady state number when the programme reached its 3rd year. The syllabus may require restructuring and fine tuning as more domain experts are on board.

Finally, there were not enough exchanges between design modules and engineering modules to develop truly integrated knowledge, resulting in isolation and mutual exclusion of design and engineering skills. This phenomenon may be partly due to human nature and partly due to the transient nature of lecturers.

References:

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