
Industry education integration: improving students' course subject application

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Abstract

This poster abstract discusses ways of incorporating applications in industry and non-profit organisations into courses to allow students to get a clear view on how the course subject is applied and used. Value-add is found in integrating industry contacts into courses to let students pro-actively work towards a match with industry, rather than validating their study after passing the majority of courses.

Keywords

Industry relationships, industry-institute integration, industry-academia collaboration, pre-graduation industry experience, applied technology experience.

Introduction

This poster abstract describes established relationships, and initiates further discussion on the role of industry and non-profit organisations in applied technology courses, with the purpose to give students a clear view on job perspectives while still studying.

Understanding the different backgrounds of students, the educational institute, and the industry and organisations are paramount for finding common grounds that establish a fruitful cooperation.

Students participate in pre-graduation industry experiences that are blended with their subject papers. This is different from internships that are typically a sequel to completed papers. Industry and organisations connect to a group of students as they are learning their paper subject. The educational institute is a mediator allowing the lecturer to keep a close match between the paper material and industry requirements.

Goals

We want to strive towards a good match between student capabilities and industry requirements. That means: 1) allow students to experience what is expected, and how the subject is applied; 2) allow the lecturer to respond to ever changing market needs with modifications to teaching materials and techniques; and 3) allow industry and organisations to communicate with a group of potential/future employees to express their offerings in detail related to the course subject.

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Different backgrounds

Newly learnt subject topics are illustrated in class with a few examples. These examples are typically small-scale and tailored to supporting these new topics. A wider, realistic, and often more complex environment is found in industry and organisations. This opens up new challenges in applying significantly more factors.

Scheduling such sessions requires flexible planning as the course timetable not necessarily matches events in the market place that can be very supportive for the students' learning.

Site visits

Site visits give students early access to real-life environments in which the subject material is applied. It shows the trade-off between an optimal technology driven solution, and a less-optimal resource-driven solution. Resources typically involve time, money, and people in relation to market needs.

Students get a better understanding of what is expected. Understanding the course subject becomes more a job requirement than an educational requirement.

Guest speakers

A different person from a different (non-educational) context who delivers a similar message puts trust in the usefulness and need to master the subject. Illustrations of real-life examples provide a rich context to relate the course content to actual events. The effort industry is willing to put into discussing the subject with the students is understood by the students as a support for their education as a required foundation.

Industry directed assignments

Assignments can be chosen such that they benefit industry/organisations. These are typically low-cost, low-priority assignments to allow for longer time-spans and generally available resources. The students are directly involved in industry requirements and work relationships when applying their course subject. As

they learn the subject they are constantly exposed to the relation with industry. This gives students input *during* their study to direct and steer their focus, and to adapt to a wide range of inputs that need to be filtered for their needs.

Future work

Further research is needed into approaches and communications finding common grounds for students, the educational institute, and the industry and organisations. More insight is required into working with a shared goal that is beneficial for all parties. The provisional conclusions of this abstract require confirmation through evaluations.

Results

Several relations have been established with industry in Hawke's Bay that allow students to interact with real-life events in the market place. The students benefit from first contacts in industry, and are more able to prioritise and understand the relevance of the subject material.

Bibliography

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