

The Importance of Non-Technical Human Skills for the Software Engineering Education

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A Software Engineering graduate, in general acquires technical skills and theoretical knowledge, throughout the time they spent at the university. However, Rivera-Ibarra, et al., 2010(states that “A competency framework defines a set of knowledge, skills, and behaviors that professionals must have to excel in their careers .” This justifies, to excel in their carrier, they also require a set of non-technical human skills) NTHS). (IEEE & ACM, 2015(states, interpersonal relations play a central role in many software engineering activities . Communication skills, ability to work in a team, problem-solving skills, planning and organizational skills, ability to obtain and process information, and ability to analyse quantitative data are the most desired characteristics that industry has scaled . Nevertheless, this area in the tertiary education system is not focused enough to fulfill the necessity, though it is a career deciding requirement.

Therefore, it is a timely need to achieve the balance)Comber, et al., 1996(in curricula designing . Though the Software engineering field emerged five decades ago, this gray area in software engineering education was given less attention by the researchers, which limited its progress) . Malik & Zafar , 2012 (states, inadequate curriculum for software engineering is considered to be one of the most common software risks . Although, the increasing demand of software engineering professionals in government and business sector has increased pressure on academic institutes to produce greater number of competent software developers, still there is a considerable gap between the topics taught to students in university courses and the skills and practical knowledge required by the industry . Due to this gap, companies have to provide an extra training to fresh graduates before assigning actual jobs to them . Furthermore)Mannan, 2014 (emphasise, the importance of NTHS ensures the success of career .

For this research purpose, conducted interviews with key decision making personalities of prominent software developing companies in Sri Lanka . Also, analysed the Sri Lankan prominent tertiary education providers’ web sites to examine the structure of the Software Engineering undergraduate course . To analyse the research area, mainly depended on the primary data, due to the lack of information available on this research area in Sri Lanka.

Findings justify the graduates are not aligned with the industry requirements at the time they enter . Therefore, companies are compelling to spend a considerable time to train them to assign an actual job . On the other hand, tertiary education providers ’website analysis evidenced that the tertiary education system in Sri Lanka has not filled the gap in creating software engineers . The course content does not support or does not have a continuous learning method or module to acquire this crucial need .

This research finding concludes that, Sri Lanka as an emerging Software exporting nation)Malik & Zafar , 2012 (it is the best time to re-think for a curriculum change, to make more productive and employable graduates for the industry.

Keywords : Tertiary Education, Software Engineering Education, Non-Technical Human Skills, Career requirement, Curriculum Change.

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