Design Thinking and Project-Based Learning: Opportunities, Challenges, and Possibilities

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Abstract : High unemployment rates and a shortage of experienced and qualified employees appear to be a paradox that currently plagues most countries worldwide. In a developing country like South Africa, the rate of unemployment is reported to be approximately 35%, the highest recorded globally. At the same time, a countrywide deficit in experienced and qualified potential employees is reported in South Africa, which is causing fierce rivalry among firms. Employers have reported that graduates are very rarely able to meet the demands of the job as there are gaps in their knowledge and conceptual understanding and other 21st-century competencies, attributes, and dispositions required to successfully negotiate the multiple responsibilities of employees in organizations. In addition, the rates of unemployment and suitability of graduates appear to be skewed by race and social class, the continued effects of a legacy of inequitable educational access. Higher Education in the current technologically advanced and dynamic world needs to serve as an agent of transformation, aspiring to develop graduates to be creative, flexible, critical, and with entrepreneurial acumen. This requires that higher education curricula and pedagogy require a re-envisioning of our selection, sequencing, and pacing of the learning, teaching, and assessment. At a particular Higher education Institution in South Africa, Design Thinking and Project Based learning are being adopted as two approaches that aim to enhance the student experience through the provision of a "distinctive education" that brings together disciplinary knowledge, professional engagement, technology, innovation, and entrepreneurship. Using these methodologies forces the students to solve real-time applied problems using various forms of knowledge and finding innovative solutions that can result in new products and services. The intention is to promote the development of skills for self-directed learning, facilitate the development of self-awareness, and contribute to students being active partners in the application and production of knowledge. These approaches emphasize active and collaborative learning, teamwork, conflict resolution, and problem-solving through effective integration of theory and practice. In principle, both these approaches are extremely impactful. However, at the institution in this study, the implementation of the PBL and DT was not as "smooth" as anticipated. This presentation reports on the analysis of the implementation of these two approaches within higher education curricula at a particular university in South Africa. The study adopts a qualitative case study design. Data were generated through the use of surveys, evaluation feedback at workshops, and content analysis of project reports. Data were analyzed using document analysis, content, and thematic analysis. Initial analysis shows that the forces constraining the implementation of PBL and DT range from the capacity to engage with DT and PBL, both from staff and students, educational contextual realities of higher education institutions, administrative processes, and resources. At the same time, the implementation of DT and PBL was enabled through the allocation of strategic funding and capacity development workshops. These factors, however, could not achieve maximum impact. In addition, the presentation will include recommendations on how DT and PBL could be adapted for differing contexts will be explored.

Keywords : design thinking, project based learning, innovative higher education pedagogy, student and staff capacity development