Assemblage of CoreLife Skills Through Technological Innovation:
A Case Study Informed by Actor-Network Theory

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ABSTRACT

With the increasing emphasis on developing graduate employability skills, termed as CoreLife Skills in the United Arab Emirates (UAE), and growing use of technology in education; this research investigates the assemblage of CoreLife Skills through technological innovation in a vocational education and training (VET) institute in the UAE. This article draws on the concepts of the sociology of translation from an Actor-Network Theory as both methodological and analytical tool. The research unfolds the socio-material assemblages using existing frameworks: Levels of Teaching Innovation (LoTi) and HEAT (higher order thinking, engaged learning, authentic learning, and technology use). The research stirred the development of technology-enhanced learning and a CoreLife Skills development (TEL-CSD) framework for effective integration of technology to enhance students' CoreLife Skills. Based on the findings, two conclusions are drawn: CoreLife Skills cannot be developed independently of general learning and cognitive skills, and technology alone cannot promote CoreLife Skills.

KEYWORDS

Actor-Network Theory, Cognitive Skills, CoreLife Skills, Employability Skills, Employability Skills Model, HEAT Framework, LoT Framework, Technological Innovation, Vocational Education and Training

INTRODUCTION

In recent years, there is growing concern about insufficient employability skills among UAE graduates. According to a survey conducted by Parthenon, experts on education and school systems in the Gulf region, many employers in the UAE think students have insufficient employability skills (Kapur, 2013). The traditional education system followed in secondary and tertiary education in the UAE mostly emphasises on learning by rote and memorising with little emphasis on developing skills (Munajjed, 2012). As a result, development of critical thinking, problem-solving, decision-making, initiative, creativity, innovation, collaboration, flexibility, leadership, and responsibility is restricted (Munajjed, 2012). In this context, VET has been stressed as it offers specific, hands-on training, thereby developing employability skills (Hoteit, Hachem, & Zein, 2014).

This empirical research explores socio-material assemblages of students' CoreLife Skills through technology integration in a VET institute in the UAE. "CoreLife Skills" is the brand name used in the UAE for generic or employability skills (National Qualifications Authority, 2012, p. 74) that constitute information management, communication skills, teamwork skills, numerical literacy,

problem-solving, application of technology and participation in social and civic life (National Qualifications Authority, 2016).

APPROACHES TO ENHANCE GRADUATE EMPLOYABILITY SKILLS

The higher education (HE) and VET institutions worldwide are adopting various approaches to equip graduates with the required skills to cater to the growing need of employability skills. Some of the approaches identified in the literature include:

…providing academic staff with relevant support and resources, integrating these skills into curriculum and course design, providing students with work placements and exposure to professional settings and providing advice and guidance through career services … participation in clubs and societies. (Precision Consultancy, 2007, p. 3)

In the UAE educational context, there are limited studies that discuss the pedagogical practices and strategies used to develop CoreLife Skills. One of the standard approaches identified in literature is the provision of workshops and work experience to graduate students for enhancing employability skills. For instance, World of Work programme (El-Temtamy, O'Neill, & Midraj, 2016) implemented by Zayed University, four weeks work experience course embedded in all the programmes offered at Higher Colleges of Technology (2017).

Alternative pedagogical approaches discussed in the literature include integration of information and communication technology (ICT) and cognitive skills in the curriculum and assessment of skills. Ranginya and McKenzie (2005) studied how the integration of critical cognitive skills in the ICT curriculum, promote students' cognitive and technical proficiencies in the UAE University. Students demonstrated how they could acquire and assess information; advance their communication and information management skills; and solve real-world problems by completing scenario-based assessment tasks using ICT software tools. Schoepp and Danaher (2016) investigated the effectiveness of scenario-based online discussion forum for demonstrating six skills: communication, teamwork, understanding ethics and professionalism, understanding global and societal contexts, lifelong learning, and knowledge of contemporary issues, at Zayed University. Though these studies highlight how CoreLife Skills could be developed in classrooms by integrating ICT and cognitive skills in the curriculum; there are other studies, which cast doubt on the assumption that employability skills can be efficiently developed within classrooms (Cranmer, 2006).

At the national level, the National Qualification Authority (NQA) of the UAE, along with its allies, is working to facilitate and monitor the introduction and implementation of CoreLife Skills within the appropriate context of the general education, HE and VET sectors (National Qualifications Authority, 2012). NQA expects the integration of CoreLife Skills into all qualifications recognised on the national qualifications framework (QF*Emirates*) at every level (i.e., level 1 to level 10). Though technology is defined as one of the seven CoreLife Skills, its influence on the development of the other six CoreLife Skills needs exploration.

INTEGRATION OF TECHNOLOGY IN INSTRUCTION

The Office of Technology Assessment (1995) and more recently, Summak, Samancioğlu, and Bağlibel (2010) have stated that technology, in and of itself, does not directly change teaching or learning but

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