

The Essential Principles of Practice-Based Learning

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Abstract—Vocational education faces a number of challenges, in which one of the biggest issues is skills mismatch. Skills mismatch occurs when workers have either fewer or more skills than jobs require. Some mismatch is inevitable, as the labor market involves complex decisions of employers and workers, and depends on many external factors. Skills mismatch has become more prominent in the global economic crisis. Practice-based learning can be considered to overcome this issue. This paper is offered as an introduction to practice-based learning. The nature of practice-based learning is defined and its essential principles are introduced. The paper concludes with some of the advantages of practice-based learning along with some of its drawbacks.

Keywords— *practice-based learning; curriculum practices; vocational education*

I. INTRODUCTION

One of the biggest issues in vocational education is skills mismatch [7]. Skills mismatch is a situation where there is a (qualitative) discrepancy between the qualifications and skills that individuals possess and those that are needed by the labor market [2]. Skills mismatch occurs when workers have either fewer or more skills than jobs require [8].

Mourshed, Farrell, & Barton (2012) published a groundbreaking study of the impact of education on employment that demonstrates the challenging mismatch between our educational system and the job skills employers need [3]. It also demonstrates the tremendous need for skills in the workforce and points out many gaps in the educational system's ability to drive these skills. The Wall Street Journal (2014) reported rising complaints by small business owners about their inability to fill critical job openings. The problem is not on the lack of job, but the skilled workers to fill it [6].

Practice-based learning is a very potential solution to solve the skills mismatch due to the nature of practice-based learning which oriented to the needs of the labor market.

In order to fully understand practiced-based learning, it is very important to know its definition. Unfortunately, there is no single universally agreed definition of practice-based learning; it is interconnected with and interdependent on other professional activities such as service development and regulation, as well as educational activities such as assessment and accreditation. Colorado School of Public Health (2017) states that practice-based learning combines the current and innovative educational curriculum of the school's academic degree programs with real-world experiences. Other definition from QAA Scotland (2011), Practice-based learning is learning which is explicitly designed to relate to professional practice standards [4]. It includes learning which is work-based,

undertaken in placements and which aims to enhance learners' employability. Practice-based learning is about making the learning environment as realistic as possible and requires students to demonstrate what they know by linking theory and practice. Despite the differences, all of those definitions have a common similarity that can be extracted as the essential principle of practice-based learning.

II. METHOD

The research methodology for this study was reviewing published studies and research on practice-based learning, the range of which included literature reviews and empirical research.

The primary literature sources were journaled articles and full texts. This paper is offered as an introduction to practice-based learning. The nature of practice-based learning is defined and the essential principles of practice-based learning are introduced. The paper concludes with some of the advantages of practice-based learning along with some of its drawbacks.

III. RESULT AND DISCUSSIONS

A. Adaptive Curriculum

In order to overcome skills mismatch, the curriculum of practice-based learning must be adapted to the needs of the workplace. According to OECD (2009), This principle has been indirectly used in many countries.

Over recent years Australia has been moving from a strategic planning model to a student demand driven system where each state and territory has adapted different skills forecasting methods to meet local needs. During the 1990s and early 2000s, under national arrangements the amount and mix of publicly funded VET provision were determined based on projections for each industry of future employment and training needs, taking account of training provided by privately funded institutions. The MONASH model, operating since 1993, provided mid-term (5-15 years) forecasts covering 113 industries and 115 commodities. National forecasts by industry were converted into regional forecasts, broken down into 341 occupational unit groups of the Australian Standard Classification of Occupations. These were then used to determine the employment outlook for workers by age, sex, qualifications and working hours per week.

Two mechanisms play a role in anticipating skills needs in Ireland. First, the 'Expert Group on Future Skills Needs' includes representatives of social partners, government departments, industrial development organizations and

education and training bodies. Its objectives include identifying skills needs, developing techniques that will assist skills forecasts and advising decisions related to training policies. It produces long-term forecasts, as well as projections of future demand by occupational groups under different growth scenarios (EGFSN, 2007). Two, the 'FÁS/ESRI Manpower Forecasting Programme' aims to provide information on the changing pattern of occupations and to identify skills needs in broad occupational fields. This information supports FÁS (the National Training and Employment Authority) in defining medium-term strategies and planning provision. The Skills and Labour Market Research Unit, located in FÁS maintains a database on the supply and demand of skills at the national level with the aim of facilitating the analysis and forecasting of skills needs. Qualitative approaches are also used. Much of the National Skills Strategy was based on interviews and consultations that pointed out possible future skills trends. At the local level, the mix of VET provision is determined on the basis of local data, including demand from students, expected local employer needs, labor market outcomes of existing programmes and consultation with local social organizations and chambers of commerce. There is, however, increasing pressure on institutions from the National Qualifications Authority to align their courses with identified skills needs (CEDEFOP, 2008a).

Labor market forecasts have been used since the 1970s for policy planning in Finland. They are based on two models (Saijets et al., 2006). First, Long-Term Labor Force Model: Under a baseline and a target scenario, projections are produced for labor force and employment by industry. Forecasts are prepared every three to five years by the Ministry of Labor. Two, Anticipating Educational Needs: This is an exercise carried out by the National Board of Education. Using labor force projections, it aims to forecast demand for new recruits by occupational groups and the supply of new job-seekers. Based on these forecasts, the anticipated educational need is determined by occupational field and level of education (upper secondary VET, polytechnics, universities) (FNBE, 2005). The results of these forecasts are fed into national policy planning and are used to inform local VET policy making (CEDEFOP, 2008b). The owners of VET institutions (joint municipal authority, local authority, state or private organizations) are free to determine the mix of VET provision according to local needs. They can decide on the form in which VET is provided and the educational institutions they maintain (FNBE).

B. Workplace Experience

There is evidence from the grounded perceptions of the participants in the study that the embedded nature of learning activities is supported for the development of a range of knowledge types and problem-solving strategies [1]. Those aids to learning which were not embedded in a culture of practice were not as valued. One of these, learning guides, was requested to be given context through work experiences. This embedded learning is explained as providing representations, arising out of activities that cannot be easily replaced by the descriptions provided through disengaging instructional processes (Brown, et. al. 1989). When the learning is without appropriate context and is based on the description, the whole

nature of the interaction changes and understanding becomes more complex. Billett (1994) suggests that learning arrangements which are situated in a setting of a culture of practice, is not, by itself, a sufficient quality for the optimum appropriation of skills and knowledge [1]. Rather, for situated learning to be effective needs to be embedded in the authentic activities and social relations which comprise cultural practice. This does not exclude instructional interludes to deepen an understanding of vocational activities but suggests that learning activities which fail to access and engage in a culture of practice are less likely to be generative of effective learning outcomes.

As part of the curriculum, students often take part in work experience or work placement. Students benefit from the partnerships established between industry, enterprises, unions, and schools that better prepare them for the world of work.

Students are placed with employers primarily to observe and learn – not to undertake activities which require extensive training or experience. Students need to participate in a variety of workplace learning activities while they are still at school to assist in their development of a realistic understanding of the world of work. These activities are an integral part of their learning and career development and help students to develop employability skills; explore possible career options; understand employer expectations; and increase their self-understanding, maturity, independence, and self-confidence.

C. Stakeholder collaboration

Practice-based learning is interconnected with and interdependent on other professional activities such as service development and regulation, as well as educational activities such as assessment and accreditation (Colorado School of Public Health, 2017). According to European Agency for Special Needs and Inclusive Education (2013), Successful practice demands the involvement of all stakeholders from the vocational education field. There are 4 patterns focusing on the perspectives and roles of key stakeholders within VET:

- Management pattern: this includes relevant factors related to head teachers and/or managers of VET organizations.
- Vocational education and training pattern: this includes relevant factors related to teachers, trainers and support staff.
- Learners' pattern: this includes relevant factors related to learners.
- Labour market pattern: this includes relevant factors related to current and future employers/labor market representatives.

Partnerships involving all stakeholders and services are established, formalized and coordinated. This includes establishing co-operation structures with local companies for practical training and/or jobs after graduation. There is partnership between VET institutions and parents, based on strong, formal co-operation and dialogue with parents as equal partners. Stakeholders are committed to quality assurance and improvement strategies. Programmes are implemented and certified to enhance VET quality and continuously improve learners' preparation for the labor market.

D. Indicator

Practice-based learning has several indicators including but not limited to (1) students are learning in the workplace in either paid or unpaid positions, (2) students are learning through participation in industry-based tasks and/or projects as part of the curriculum, (3) students are learning about skills for career management as part of their curriculum, (4) students are learning through activities in class time that emulate activities undertaken by a professional (e.g. laboratories have appropriate standards of dress, safety procedures, standard operating procedures, quality control), (5) students are learning skills in using software tools that are identical to that used by practicing professionals, (6) students are learning through simulations of workplace environments as part of their curriculum, (7) students are assessed and given feedback on Graduate Qualities indicators that have been mapped on to professional competencies, (8) academic teaching staff in the course are practicing professionals with opportunities to share their experiences during classes. Students are able to connect with their professional body - and their ethics; code of conduct - as part of curriculum activities.

IV. CONCLUSION

In conclusion, the authors found that there are 3 essential principles of practice-based learning: 1) Adaptive curriculum, 2) Workplace experience; and 3) Stakeholder Collaboration. These 3 principles are not intended to be rigid principles but it is open to further discussion.

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