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A Conceptual Paper on the Relationship between Self-RegulatedLearning, Satisfaction towards Personal Record Building and Employability Skills

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Abstract

This conceptual paper discusses the relationship between self-regulated learning, satisfactiontowards personal record building, and employability skills. There is a mismatch of employability skillsbetween the demand of industry and the supply by higher learning institutions. Literature shows that soft skills are emerging as important as technical skills among TVET graduates in the era of IndustrialRevolution 4.0. The Personal Record Building (PRB) system was initiated by a technical university toassist in the development of these soft skills. Centralising students' Self-regulated learning (SRL), PRBis an initiative to capture students' participation and achievement in both academic and non-academic activities through a systematic merit. While many researchers have investigated issues concerning employability skills, little is known about the significance of SRL and the role of PRB towards the development of students' employability skills. The objective of this concept paper is to propose an areaof investigation on the relationship between SRL and employability skills mediated by satisfaction towards PRB. Various employability skills frameworks, Motivated Strategies for Learning Questionnaire (MSLQ) and Learners' satisfaction survey were referred to in the attempt to explore thepotential relationships among the variables. It is anticipated that the data obtained could be presented in the form of descriptive analysis and inferential analysis using PSL-SEM 3.0. All in all, the conceptualpaper hopes to highlight the potential significant findings which could later assist higher learning institutions to improve the utilization of PRB as an initiative to develop employability skills.

Keywords: Employability Skills, Personal Record Building, Self-regulated Learning

Introduction

Industry Revolution 4.0 has forced the educational stakeholders to evolve their views and methods of preparing learners for the workplace. According to the Critical Occupation List 2018/2019,these changes are necessary to meet the era of digitalization and emergence of

new skills. These new skills involved technical, vocational and soft skills (Institute of Labour Market Information and Analysis (ILMIA) (2019). Learners must be given the awareness and opportunities to upskill and reskill their abilities to compete and stay relevant at the workplace. To take up this challenge, Malaysia, in its Eleventh Plan has strategically emphasised Technical and Vocational Education Training (TVET). Although TVET primarily focuses on technical and vocational knowledge, HLIs must be aware of the rising importance of soft skills. Prianto et al (2021) reported that academic knowledge is no longer the main factor in determining employment of graduates, but soft skills too. Their study has somewhat suggested that a university degree alone does not warrant you a job. Recent literature supports this by revealing that the working industry gave equal emphasis on soft skills as a critical factor for employment among TVET graduates (Abdul Karim & Maat, 2019). While HLIs have been centralisingacademic and professional qualifications, employers in the industry demand graduates to be competentin soft-employability skills (Khazanah Research Institute, 2018). The employability skills gap betweenthe focus of HLIs and the demand of industry has called for this research.

Many terms are used to address soft skills in the workplace context. According to the National Centre for Vocational Education Research (NCVER, 2003), some common terms used to refer to soft skills are transferable skills, key competencies, employability skills, generic skills and core skills. This research will use the term *employability skills,* in accordance to the Allen Consulting Group Report (2006) in Fulgence (2015) which revealed that industry prefers the term employability skills. In addition, since this research proposed TVET as scope of study, the term employability skills is an ideal selection as the term has been widely used in studies (Abdul Karim& Maat, 2019).

In an effort to tackle the employability skills gap, the Malaysian government introduced schemes like 1Malaysia Training Scheme (SL1M) and Graduate Career Accelerated Programme (GCAP) to re-train fresh graduates. However, this effort was found not to be cost-effective (Azmi et al., 2018). Consequently, via the Malaysian Education Blueprint 2015-2025, a consensus was reached where employability skills shall be groomed within their years in HLIs by enhancing learning experience and modulating an integrated Cumulative Grade Point Average (iCGPA) to evaluate learners' attributes. Introduced in 2015, the purpose of iCGPA is to produce holistic, entrepreneurial, and balanced graduates through academic and co-curricular activities (Ministry of Higher Education, 2018).The utilisation of academic and co-curricular activities is parallel to the concept of experiential learning and life-wide learning where the acquisition of learning occurs through formal and informal spaces, with academic knowledge and co-curricular activities representing the different spaces within the students' experience (Barnett, 2011). Bridgstock (2009) highlighted that HLIs should embed teaching, learning and assessment of skills like communication, critical thinking, problem-solving and teamwork in the curriculum. However, it is not an easy task for the TVET industry as Khandu (2014) stated that the TVET curriculum is compact and learners will be burdened if more content is added. Aspirationally, employability skills could be manifested through learners' involvement in either formalsettings like classroom, workshops or laboratories or informal educational settings like learners' participation in activities that are not embedded in their curriculum.

Acknowledging the contribution of both academic and co-curricular activities towards developing employability skills, Kember et al (2017) suggested that learners need to capture their participation and achievement in both areas. There is a necessity to give recognition to learners' employability skills as much as their academic performance, which is commonly

recognized through transcripts because these skills are often 'out of the radar'. Longley and Kensington-Miller (2019) added that generic skills must be made visible to employers and learners. Hence, Gillespie (2002) proposed a system for personal record building to be established in order to documentise theirdevelopment of relevant skills. Since then, HLIs in the United Kingdom (UK) have been modelling theconcept of personal record building (PRB). Table 1 shows initiatives of some HLIs in the UK and Malaysia.

Table 1
Skills development and personal recording initiatives

Skills Development and Personal Recording	Institutions
Liverpool University Student Interactive Database (LUSID)	University of Liverpool
Personal Academic Development for Students in Higher	Education (PADSHE)
Skills Passport Project and Skills Evidence and Evaluation	Record (SEER)
University of Nottingham Edinburgh Napier University	
Graduate Higher Order Critical Skills (GHOCS)	Universiti Kuala
LumpurGraduate Employability Skills (GEmS)	Management and
Science	
	University

Research Gaps and Objectives

In comparison to Malaysia, skills development and PRB are more common in the UK. Based on Table 1, there is no uniformed implementation of PRB. HLIs developed systems that are institutionally designed to encourage learners to be independent and responsible for their learning experience, especially employability skills. According to Campbell Casey et al. (2018), the Skills Passport Projectwhich was developed at Edinburgh Napier University aims to encourage learners to document and reflect on their skills during their time at university for employment preparation. Despite the various systems created, as seen in Table 1, the purpose is similar; to nurture soft skills development by engaging, reflecting, and recording the activities learners have participated. Recent study by Mitchell et al. (2021) has confirmed that recording learners' skills in portfolios is increasingly being used in HLIs to showcase learners' employability skills. The initiative of PRB is essential as learners cannot depend solely on a university degree as a promising factor for employment.

`This research proposed to examine PRB as an employability skills development initiative in aprivate TVET university to reduce the skills gap highlighted in the issue of employability. The selectedPRB system proposed in this research was designed to build learners' characters by awarding and recording their achievements and participation in any activities during their learning time at university. Learners are highly encouraged to record and reflect their experience using the system. Despite the growing implementation of PRB, there is a knowledge gap on learners' readiness, competence, and satisfaction in utilising the PRB to develop employability skills, especially in the Malaysian scope. Highlights were given towards strategies and initiatives deployed by the government and HLIs, withouttaking into consideration the role of learners in exploiting these initiatives. Tomlinson (2012) described learners' opinions as 'the missing perspective' in regard to their skills development. Hence, Mitchell etal (2021) recommended for future research to explore graduates and learners' perspectives of the use of PRB (known as ePortfolios in their study) to enhance

employability. To fill the gap, this research proposed to look into learners' satisfaction towards the PRB system in the selected university. Learners' perceived satisfaction significantly influences the reliability of a system. Thus, exploring user satisfaction towards a system is an indicator of assessing an information system (Wang, 2003).

Since the concept of PRB requires learners to be independent and self-directed, it is worth looking into their self-regulated learning strategies (SRL). Zimmerman (2000) defined self-regulated learning as self-generated thoughts, feelings and actions that are planned and cyclically adapted to attainpersonal goals. Exploring the relationship between self-regulated learning strategies and PRB is crucialas the latter centralises on learners' ability to assess their current knowledge and skills, set goals they want to achieve, strategies and monitor their action before reflecting and recording their performance. Krause (2006) concurred that ePortfolios gave room for learners to critically reflect on one's learning and by demonstrating evidence of learning and skill development. As a result, learners are expected tobe aware of their skills development and make strategic decisions of the activities they are planning toparticipate in. In addition, Cheng and Chau (2013) suggested that learners should be equipped with effective SRL techniques to engage effectively in and benefit from ePortfolios activities.

Little is known on how SRL has influenced learners in the area of PRB. Most studies regarding SRL concentrated on its relationship towards the area of online learning satisfaction or academic achievement. Based on literature review in these areas, many learners were not self-regulated (Azevedo, 2005; Zimmerman, 2000: Pintrich, 2000). However, Lim et al (2020) and Ejubović and Puška (2019) found a positive relationship between SRL and learners' satisfaction. Taking into consideration the absence of empirical evidence to determine the connection between SRL and satisfaction towards PRB,as well as the knowledge gap of how PRB system contributes towards the development of employabilityskills, this research plans to fill the gaps by exploring whether SRL helps influence the development ofemployability skills in the presence of satisfaction towards PRB as a mediator.

The research aims at exploring the relationship between SRL, satisfaction towards PRB and employability skills. To achieve this, this research will attempt to investigate whether SRL helps influence the development of employability skills in the presence of learners' satisfaction towards the PRB system as a mediating variable. The objectives are constructed as below:

- To determine the relationship between Self-regulated learning and satisfaction towards Personal record building.
- To determine the relationship between satisfaction towards Personal record building and employability skills.
- To examine the mediating effect of satisfaction towards Personal record building towards influencing the relationship between Self-regulated learning and employability skills.

With regard to the objectives above, this research will be guided by the following conceptual framework. Figure 1 illustrates the three main variables in this research. Firstly, to investigate learners'SRL, five SRL strategies were drawn from previous literature. There are:

- Goal-setting: Learners' justification of engaging in a learning task (Pintrich, 2000).

In the context of this research, intrinsic and extrinsic goals will be explored. When learners set intrinsic goals,they are aiming for the acquisition of knowledge, ability and competence (Pintrich, 2000). On the other hand, when learners set extrinsic goals, they are aiming for

reasons like rewards, grades and recognition. Zimmerman (2002) analogised the concept of extrinsic motivation to the "bells and whistles" approach that traditional educators embark in. In this research, goal setting is defined as students' intrinsic and extrinsic goals in participatingin students' activities.

- Self-monitoring: A cognitive process that involves learners' effort to influence and facilitate their learning experience (Zimmerman, 2000). In this research, self-monitoring is defined as learners' ability to monitor their thinking and actions while performing tasks.
- Time and Environmental structuring: Learners' ability to structure their surroundings to facilitate the completion of their learning goals (Corno, 1993). In this research, time and environmental structuring refers to students' ability to determine and to adapt themselves into suitable time, location or space that will assist their participation in extracurricular and other students' activities.
- Help-seeking: Learners' awareness to whom they study and interact with in the context of co- curricular settings (Zimmerman, 2000). In this research, help-seeking is defined as students' ability to request for assistance when necessary, know where to search for assistance, to knowhow to structure inquiries and to evaluate the validity of the help.
- Self-reflection: learners' ability to reflect and to evaluate their reactions towards their determined goals and outcomes Schunk and Zimmerman (1998). In this research, self-reflectionis defined as learners' ability to evaluate their performance and comparing the goals they set totheir outcomes.

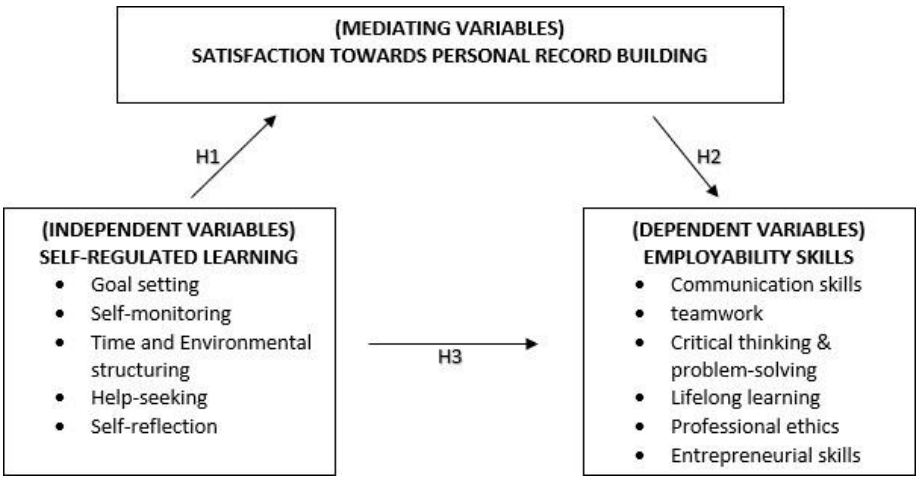

Fig. 1 Proposed Conceptual Framework

Secondly, to examine learners' satisfaction towards the PRB system, this research will be looking into system quality, service quality and perceived usefulness, as suggested by (Mtebe and Raphael, 2018). Finally, to assess learners' employability skills, six most mentioned skills were drawn from several employability skills frameworks. These skills were selected after being mapped to 21st century skills as outlined at the Future of Job,(World Economic Forum, 2016). There are:

- Communication skills: Learners' ability to express opinions or ideas through verbal and non- verbal forms using appropriate forms of presentation. In this research, learners' ability to delivermessages confidently, accurately, and coherently in any given workplace context (MQF 2nd Edition, 2017).

- Teamwork: Learners' ability to work together with people from diverse backgrounds. In this research, teamwork is defined as learners' ability to contribute to the team as a member or as aleader. When necessary, learners should be able to make decisions and be accountable for them(MQF 2nd Edition, 2017).
- Critical thinking and problem-solving: learners' ability to think critically, creatively, and innovatively in solving problems (Rasul et al, 2012). In this research, critical thinking and problem-solving is defined as learners' ability to recognize, understand, analyse, and solve problems in any given workplace context.
- Lifelong learning: In this research, lifelong learning is defined as students' ability to set smart targets and plan how to further develop themselves at the workplace, reflect critically on graduates' learning and identify ways of further improving their learning and performance (TheKey Skills Qualifications Standards and Guidance, 2004).
- Professional ethics: Learners' awareness of ethical, social, and cultural differences at the workplace. In this research, professional ethics is defined as students' ability to practice integrity and conduct professional standards like adhering to regulations, laws, and codes of professional conduct at the workplace (MQF 2nd Edition, 2017).
- Entrepreneurial skills: Learners' personal qualities in an enterprise. In this research, entrepreneurial skills are defined as students' creativity, grit, and drive to sustain in an enterprising environment (MQF 2nd Edition, 2017).

Methodology

To achieve the objectives, this research considers using a quantitative approach to gain data from samples of the targeted population. A self-developed questionnaire is preferred as it can describethe attitudes, behaviour, or characteristics of a population (Creswell, 2012). Furthermore, through questionnaires, learners will be able to practice self-assessment. Self-assessment is important as it has the potential to create learners' awareness (Jackson, 2014). In addition, assessing oneself is crucial to employability as it encourages learners to articulate their strengths and weaknesses (Rust, 2016).

a. Instrumentation

The questionnaire proposed in this research will adapt the following instruments:

- Motivated Strategies for Learning Questionnaire (MSLQ) by (Pintrich, 1993). MSLQ has beenwidely used by researchers with interest in Self-regulated learning (Zimmerman, 2008).
- Learners' satisfaction by (Mtebe and Raphel, 2018). This model improvised the famous DeLoneand McLean's information system success model.
- Self-developed items based on 8 employability frameworks that are relevant in the TVET context. This research proposed employability frameworks which were developed by accreditation bodies and national standards. Table 2 shows the list of employability frameworksselected.

Table 2
List of accreditation bodies and national standards

	United States	**United Kingdom**	**Australia**	**Malaysia**
National Standards Employability Skills Framework	Secretary Commission on Achieving Necessary Skills (SCANS)	Qualification and Curriculum Authority (QCA) Key skills	The National Quality Council Employability Skills Framework	Ministry of Higher Education Soft Skills
Accreditation bodies for engineering technology	Accreditation Board for Engineering and Technology (ABET)	Engineering Council United Kingdom (ECUK)	Engineers Australia (EA)	Board of Engineers Malaysia (BEM).

b. Sample and Population

The population of this research will be final year learners at a private technical university. Sincethere are four bachelor programmes offered at the university, this research plans to use stratified randomsampling to ensure that the four programmes were equally represented in the research. Final year learners were selected as they have experienced the Personal record building system for approximately4 to 6 semesters. Furthermore, they are expected to have just completed or are undergoing their industrial training. Using Krejcie and Morgan Table (1970), the sample will be determined.

c. Data Collection and Data Analysis

Since the Covid-19 pandemic has set a strict standard of procedure for higher learning institutions to operate, this research suggests the data to be collected through online mediums like Google Meet, Microsoft Teams, and WhatsApp. These are the most applicable approaches as most of the learners will be scattered across Malaysia during their industrial training. Assistance will be requiredby the Academic Executive responsible for managing learners' data to trace learners' contact numbersand emails.

Smart-PLS will be employed for data analysis because the nature of this research is based on predictions of many variables. According to Hair et al (2016), when a researcher anticipated a complexmodel, which involved mediating variables or moderating variables, Smart-PLS is suitable. Besides that, Smart-PLS is able to analyse data even if the number of data collected is small.

A pilot study will be conducted to measure the reliability and validity of the instrument designedfor this research. Once the data is collected, data cleaning will be run before the measurement model and the structural model are analysed.

Conclusion

It is hoped that this conceptual paper has brought light to the relevance of the proposed research.It is anticipated that the proposed research will produce data and results that will be helpful in identifying the relationship between self-regulated learning, personal record building and employabilityskills. Discovering whether learners' satisfaction mediates the relationship between self-regulated learning and employability skills will firstly, allow higher learning institutions to have constructive feedback towards their strategic initiative to

develop learners' employability skills. From there, they could deliberately form improvement plans towards their personal record building systems and decide whether the teaching of employability skills are effectively encouraged through personal record building. Secondly, learners could benefit by developing awareness towards their self-regulatory abilities and employability skills that are as equally as crucial as academic performance. Finally, futureemployers could have better understanding about the role of the personal record building system whichwas providing evidence of graduates' employability skills.

Co-Author Contribution

The authors affirmed that there is no conflict of interest in this article. Author 1 prepared the literature review and prepared the proposed methodology. Authors 2 and 3 supervised the selection of literature review and proposed methodology and overlooked the writeup of the whole article.

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