Journal of Education and Work

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/cjew20

Relationship between 'employability' and 'higher education' from global ranker and accreditor's perspectives—does a gap exist between institutional policy making and implementation in taiwan higher education?

Angela Yung Chi Hou, Christopher Hill, Dewin Justiniano, Connie Yang & Quan Gong

To cite this article: Angela Yung Chi Hou, Christopher Hill, Dewin Justiniano, Connie Yang & Quan Gong (2021) Relationship between 'employability' and 'higher education' from global ranker and accreditor's perspectives—does a gap exist between institutional policy making and implementation in taiwan higher education?, Journal of Education and Work, 34:3, 292-312, DOI: 10.1080/13639080.2021.1922619

To link to this article: https://doi.org/10.1080/13639080.2021.1922619

Published online: 12 May 2021.

JOURNAL OF EDUCATION AND WORK
2021, VOL. 34, NO. 3, 292–312
https://doi.org/10.1080/13639080.2021.1922619

Routledge
Taylor & Francis Group

Relationship between 'employability' and 'higher education' from global ranker and accreditor's perspectives—does a gap exist between institutional policy making and implementation in taiwan higher education?

Angela Yung Chi Hou[a], Christopher Hill[b], Dewin Justiniano[c], Connie Yang[a] and Quan Gong[a]

[a]Department of Education, National Chengchi University, Taipei, Taiwan; [b]Faculty of Education, British University in Dubai, Dubai, The United Arab Emirates; [c]Office of Administration and Research, Higher Education Evaluation & Accreditation Council of Taiwan, Taipei, Taiwan

ABSTRACT

Driven by global rankings and national quality assurance (QA) initiatives, Taiwan's higher education institutions were encouraged to develop strategic plans and initiatives, in order to improve graduate student employability. The purpose of this study is to explore the polices and strategies adopted by Taiwanese higher education institutions, with a particular focus on 'employability', in terms of standards and indicators of QS ranking and Higher Education Evaluation & Accreditation Council of Taiwan (HEEACT) programme accreditation in 2017. This paper analysed strategic plans and self-assessments reports from 20 Taiwanese universities in order to determine the impact of ranking and QA on employability initiatives and associated implications for institutional policy. The study presents three major findings. First, the emergence of global ranking and national quality assurance systems pressured Taiwanese universities to situate several employability initiatives within their institutional strategic plans. Second, Taiwanese universities applied varying approaches to the integration of graduate employability into institutional policies and strategic plans, according to ranking and national accreditation standards. Third, the gap between institutional policy making and actual implementation of employability initiatives exists in the Taiwanese context.

ARTICLE HISTORY
Received 10 April 2021
Accepted 23 April 2021

KEYWORDS
Employability; global ranking; national accreditation; quality assurance

1. Introduction

Due to massification in higher education, rigorous economic conditions and severe competition in the global market in recent years, university graduates are facing 'increasing challenges in their transition from education into the workforce' than ever before (EUROSTAT 2019, 1). Due to the diminishing link between education and work, the issue of young people's 'unemployment' or even 'underemployment' is presented in the national agenda in many developed societies (Teichler 2009). In addition, there is considerable literature highlighting that an increasing supply of highly skilled graduates from the countries in mass higher education entering into global labour market, has resulted in the emergence of both unemployment as well social mobility issues in many countries (Autor 2014; Mok and Wu 2015; Mok and Neubauer 2016).

CONTACT Angela Yung Chi Hou yungchi@nccu.edu.tw Department of Education, National Chengchi University, No. 64, Sec. 2, ZhiNan Rd., Wenshan District, Taipei City 11650, Taiwan (R.O.C.).

Concurrently, employers call for higher education providers to equip students with employability skills. Although graduates are expected to find jobs by applying the knowledge and skills acquired in higher education institutions, their level of qualification and competencies frequently determines their level of success in securing employment in the market. As a result, developing students' employability has drawn increased attention from higher education providers (Blackmore et al. 2016; Mok and Neubauer 2016). This trend leads to discussions regarding how higher education institutions enable students to build core competencies during their period of study, sufficient to improve their contribution to society. To resolve this problem, the issue of graduate employment and the linkage between employability and the labour market are prioritised within higher education policies. Furthermore, universities and colleges are encouraged to reform curriculum in order to more fully engage employers in internal quality assurance mechanisms and to collect alumni feedback as well as collaboration with industries to secure internships.

Over the past decade, global rankings have significantly impacted higher education development and policymaking after the inception of the Academic Ranking of World Universities (ARWU) published by Shanghai Jiao Tong University in 2003. Shortly after ARWU'S release, in 2004, Quacquarelli Symonds Limited and Times Higher Education Supplement published an alternative ranking, called 'World University Rankings' (now QS ranking). Global rankings are launched with different purposes, methodologies and indicators. For example, the ARWU ranking, employing quantitative indicators such as numbers of Nobel Prize winners and highly cited researchers, tends to favour universities with exceptional research output and award-winning faculty. By contrast, the QS ranking evaluates an institution mainly through academic peer review and employer surveys (Hou et al. 2014; IREG 2019). Recently, the launch of a new global ranking with a focus on employability has attracted international attention. In response, universities began to initiate several strategies to build graduates' international employability.

According to International Network of Quality Assurance in Higher Education (INQAAHE), quality assurance is 'a process of establishing stakeholder confidence that provision (input, process and outcomes) fulfils expectations or measures up to threshold minimum requirements' (INQAAHE 2019, 1). Quality assurance is ubiquitous in varying higher education contexts with internal and external approaches. Similar to global rankings, quality assurance in higher education is not only the favoured management approach but also seen, by institutions, as a governmental policy tool (Harvey and Newton 2007; Stensaker 2007). In recent years, researchers believed that 'the study programme provided a good basis for starting work' (Stiwne and Alves 2010, 300). In a sense, 'employability' is viewed as 'the benefit and usefulness of the study programme for career and work tasks' (Stiwne and Alves 2010, 298). Therefore, a student learning based quality assurance scheme and approach, drives higher education institutions to integrate career development, services and related teaching activities as part of their study programmes.

With over a century of development, Taiwan's higher education system is moving from state control and regulation phase towards the path of excellence and era of quality assurance. Accompanying higher education expansion and the significant demographic change in Taiwan after the 1990s, the debate regarding ensuring university quality as well as how to equip students with employability skills for the labour market, drew national attention in Taiwan (Mok, Yu, and Ku 2013; Hou et al. 2018), while 'a mismatch between higher education, the changing labour market and people's cultural expectations' has occurred in the context (Mok and Neubauer 2016, 7).

Domestically, universities have faced growing competition regarding excellence initiatives and have undergone a process of external review since 2005. With the 'selection and concentration' policy, the Ministry of Education launched the following main excellence projects based on its mission and objectives: the Development Plan for World Class Universities and Research Centers of Excellence (2005–2016), the Teaching Excellence Initiative (2005–2016), and the Technological University Paradigms Plan (2013–2017) (Department of Higher Education 2011; Hou et al. 2014). The excellence programme aims to develop and secure at least one university within the world's top 100 universities. Based on the revised University Law, a national accreditor, Higher Education

Evaluation & Accreditation Council of Taiwan (HEEACT) was founded jointly by the Ministry of Education and 153 universities and colleges. HEEACT's mandate is to review Taiwan higher education institutions at institutional and programme levels. Universities were encouraged to pursue academic excellence globally, whereas HEEACT accreditation aimed at developing university features and strengths and enhancing student learning outcomes (Hou et al. 2018). Studies have demonstrated that top university administrators adapted to this and rapidly employed employability measures of global rankings and quality assurance to achieve global ambition and meet local demands (Lo, Wai, and Hou 2019).

Nevertheless, driven by global rankings and national quality assurance initiatives, Taiwan's higher education institutions are encouraged to develop strategic plans and initiatives for graduate student employability, such as identifying employment rate as one of the key performance indicators, strengthening internship training courses, relating study programmes to the changing job market and collecting alumni feedback. (Hou et al. 2018). The purpose of this study is to explore the polices and strategies adopted by Taiwanese higher education institutions, with a particular focus on 'employability', in terms of standards and indicators of QS ranking and Higher Education Evaluation & Accreditation Council of Taiwan (HEEACT) programme accreditation in 2017. This paper analysed strategic plans and self-assessments reports from 20 Taiwanese universities in order to determine the impact of ranking and QA on employability initiatives and associated implications for institutional policy. Research questions are as follows:

(1) What strategies would Taiwan's universities employ to embed graduate employability according to QS employability ranking and HEEACT's programme accreditation standards?
(2) How would Taiwan's universities carry out 'employability' initiatives according to institutional self-assessment reports? Does a gap exist between strategic plans and implementation?

2. Literature review

2.1 Higher education expansion, employment and employability

Rapid expansion in higher education leads to the emergence of varying types of relationships among higher education, employment and employability (Teichler 2009). However, Knight and Yorke (2004) indicated that graduate employability is 'clearly not the same as graduate employment rates' and instead should be defined as 'suitability for graduates' employment' (Knight and Yorke 2004, 9). Simply, employment means educational output, referring to the number of graduates employed in the job market. By contrast, employability means a degree of educational outcomes and achievement of an individual. Given the fact that an individual's employment is of significant importance in a society due to economic growth, employability therefore contributes to an individual's personal well-being and growth, as well as social progress (Pologeorgis 2019). Therefore, competence and qualifications are not enough for graduates to obtain jobs. Individuals may be employed, but still encounter difficulties in finding suitable jobs or transitioning into new ones due to structural mismatches of demand and supply in specific labour markets (Pavlin and Svetlicic 2012). In this regard, a high employment rate does not necessarily correspond to a high level of employability in the society. It is imperative, therefore, to develop an overall qualitative and quantitative planning of higher education, such as which programmes should be offered and how many college students should be admitted, etc.

A discussion regarding whether higher education expansion would strengthen students' employability or result in so called 'over education' subsequently emerged. Several models of interaction between higher education, employment and employability emerged (Autor 2014; Lauder, Brown, and Cheung 2018). Normally, completion of a college degree in a specific field would enable graduates to seek a job relevant to their study programme. In this model, higher education is regarded as the final stage of pre-career education, providing sufficient knowledge, skills and

training for a student seeking a job. Subject and employment in the labour market are supposedly closely linked (Teichler 2009). The second model emphasises a traditional linking of higher education to employment in professional fields such as medicine, law and accounting, among others. Under this example, a strong connection between the professional qualification in a specific study programme would lead to a vertical match among higher education, employment and employability. Uncoupling the relationship between higher education and employment is another category. Where qualification and quality of graduates cannot meet employer expectations, this would likely result in the unemployment of a graduate. In certain developed societies, youth becomes 'overeducated' because their qualifications are higher than the level required for job vacancies on offer (Autor 2014; Mok and Neubauer 2016; Winterton 2019). As discussed above, graduates' employability largely determines the relationship between higher education and employment. A possibility of a model shift occurs when occupational structure alters in the changing job market.

Several theories and approaches attempt to interpret the correlation between higher education, employment and employability from different perspectives. Human capital theory and labour market approaches have gained popularity with education policymakers. Human capital theory, viewing higher education as an investment that yields both social and private returns was advocated by education economists (Abell 1991; Ashton and Green 1996; Teichler 2009). To a certain extent, this theory highlights that higher education contributes to individual employment and social welfare. Yet, Brown, Lauder, and Cheung (2019) argues that the theory fails in the promise of learning investment leading to high incomes and national economic growth. In addition, higher education is one of the main contributing factors for economic inequality in society. In other words, higher education can both lead to high incomes and national economic growth as well pave the way for increased economic inequality. These two realities are not exactly contradictory but often corollary. One study conducted by Autor (2014) demonstrates that a gap in earnings between college and high school graduates has almost doubled from 1979 to 2012 in the United States of America. Moreover, a new scenario would likely occur in certain contexts, where higher education has been affected strongly by privatisation and marketisation. Under this context, 'individuals and families with social and cultural capital, have to take up the significant financial responsibility in getting higher education opportunities' (Mok and Jiang 2017, 239).

The labour market approach focuses on the structural change in the current employment system, the requirement of core competencies and the transition from education to employment and being employable (Teichler 2009). Nevertheless, skill-bias technical change theory highlights that productive workers with sufficient skills are favoured by the labour market, rather than those without (Sanders and Weel 2000). This notion has led to the fundamental issue of employability, that is, whether universities can provide quality study programmes which prepare students to acquire knowledge and skills required by the labour market. In other words, graduates should be equipped with knowledge and skills needed to be ready for work before graduation (Harvey 2001). 'Work-readiness' is defined as 'the propensity of the student to know what skills they have developed and how they match the criteria for a desired job' (Prikshat et al. 2019, 17). Currently, universities agree on the necessity to develop a link between study and employment, recognising graduate employability as the most important indicator to measuring learning outcomes.

Rapid expansion in higher education changes the relationship between universities and employment systems. A call for a transition from school to employment has drawn employers' attention. However, universities are criticised for not producing appropriately skilled graduates who can actually meet the need of employers. Diamond et al. (2008) highlighted the concern of employers and found that 'most universities are doing some sort of award or initiative that students can become involved in, but there is a bit of a mismatch between what industry is looking for and the way they are making sure students get that information' (Diamond et al. 2008, 19). Wilson (2012) reviewed the collaboration between universities and industry and found that 'the needs of the business do not align with the mission and strategy of the university' (Wilson 2012, 28). Hence,

a mismatch between the expectations of universities and employers over the quality of graduates continues to exist.

2. 2 Concept of employability and role of universities

Working concept of employability

The extent to which level of qualification meets job market demand is a significant topic of policy debate worldwide (Teichler 2009, 27). Currently, employability is viewed as one of the significant indicators to assess quality of qualifications. In reality, the concept of employability, in relation to the quality of education, would vary from different higher education stakeholder's perspectives. Universities realise the need to provide sufficient educational activities and training to facilitate student employment. Students expect to be employable with practical knowledge and useful skills for future employment. Graduates hope to obtain employment opportunities and succeed in their chosen occupations. In the views of government and society, employable graduates not only benefit themselves but also the local community and economy (Støren and Aamodt 2010; Niedermeier 2018). In addition to a set of personal attributes and practical skills, employers expect graduates to be equipped with a sense of commercial awareness as well international experiences (Stiwne and Alves 2010; Blackmore et al. 2016).

In spite of differing expectations, Hillage and Pollard (1999) illustrated that employability refers to a student who has the capability of getting and keeping a job. Yorke (2004) interprets 'employability' as a set of achievements, skills, understanding and attributes that support graduates to obtain employment. Harvey (2001) pointed out that employability is seen as outcomes related to recent graduate's employment rate. Aamodt and Havnes (2008) applied the concept of 'job mastery' to ensure the connection between the study programme, on-the-job training and working environment. Currently, a tendency to refer employability as part of qualification framework emerges. Take Malaysia for example, where the content of employability is defined specifically in the National Qualification Framework, including knowledge in a specific field, generic skills at workplace, level of autonomy and responsibility, and ethics (MQA 2016). Given that the rise of automation is transforming the workplace, an employable person should acquire a set of core competencies and marketable skills to succeed in the workplace and improve professionalism in the field under this digitalised, globalised and changing fast era (British Council, 2017). Several specific marketable skills, such as cyber security, digital technologies as well as arts and design are identified to facilitate students 'to employability and valuable outcomes of a higher education degree' (British Council, 2017, p. 15). In addition, soft skills such as emotional intelligence, creative thinking and complex communications are also highly valued at labour market (British Council, 2017).

Institutional approaches and initiatives over employability

Traditionally, students should take responsibility for their career planning and job seeking (Baruch 2006). As higher education expansion is contributing to the increasing number of graduates competing within the job market, universities are under pressure to ensure that graduates are employed as well as employable (Tomlinson 2007; Bridgstock 2017; Li 2013; Blackmore et al. 2016).

In response to varying expectations of higher education stakeholders, universities began to design employability strategies and programmes in support of student employment. According to their respective mission and vision, universities develop varying initiatives in institutional strategic plans. Yorke and Knight (2006) stated that 'there is a need to recognise that the co- and extra-curricular achievements of students contribute to a graduate's employability' (Yorke and Knight 2006, 2). Blackmore et al. (2016) highlighted that career services are supposed to be 'integrated into, and across, institutions via "ecosystem" or "holistic" approaches' (Blackmore et al. 2016, 8). Currently, many universities offer 'bolt-on' employability modules as part of a degree programme which emphasises practical skills and hands-on experiences (Blackmore et al. 2016). Students would have access to extra-curricular opportunities, workshops, selected courses and internship via experiential learning (Diamond et al. 2008). In summary, a growing number of universities promote

'employability' primarily via embedding employability development within study programmes, embedding employability skills within the curriculum, strengthening collaboration with industry, ensuring active involvement of career services and developing and utilising alumni networks. Yet, employability is not just a matter of the curriculum and pedagogy but of prestige and power, both with respect to top research higher education institutions and corporations. Bano & Vasantha (2019) argue that university reputation influences perceptions of employability, increases the chances of getting a job, and a competitive salary. If a student graduates from a prestigious university, he /she will have a greater chance of employment at top business companies or corporations. In pursuit of global brand and added value, universities are attempting to move up themselves in global rankings. As Hou et al. (2014) pointed out, 'many universities initially strongly criticised and resisted these rankings. At the same time, many top university administrators are learning to use global rankings wisely in order to achieve their institution's mid-term and long-term strategic objectives as well as to build their institutions as world-class universities in the future' (p. 842).

To engage universities to enhance employability with a solid and holistic approach, the United Kingdom Commission for Employment and Skills (UKCES) (UK Commission for Employment and Skills (UKCES) 2009) proposed a holistic framework entitled 'Employability Skill Wheel' model which

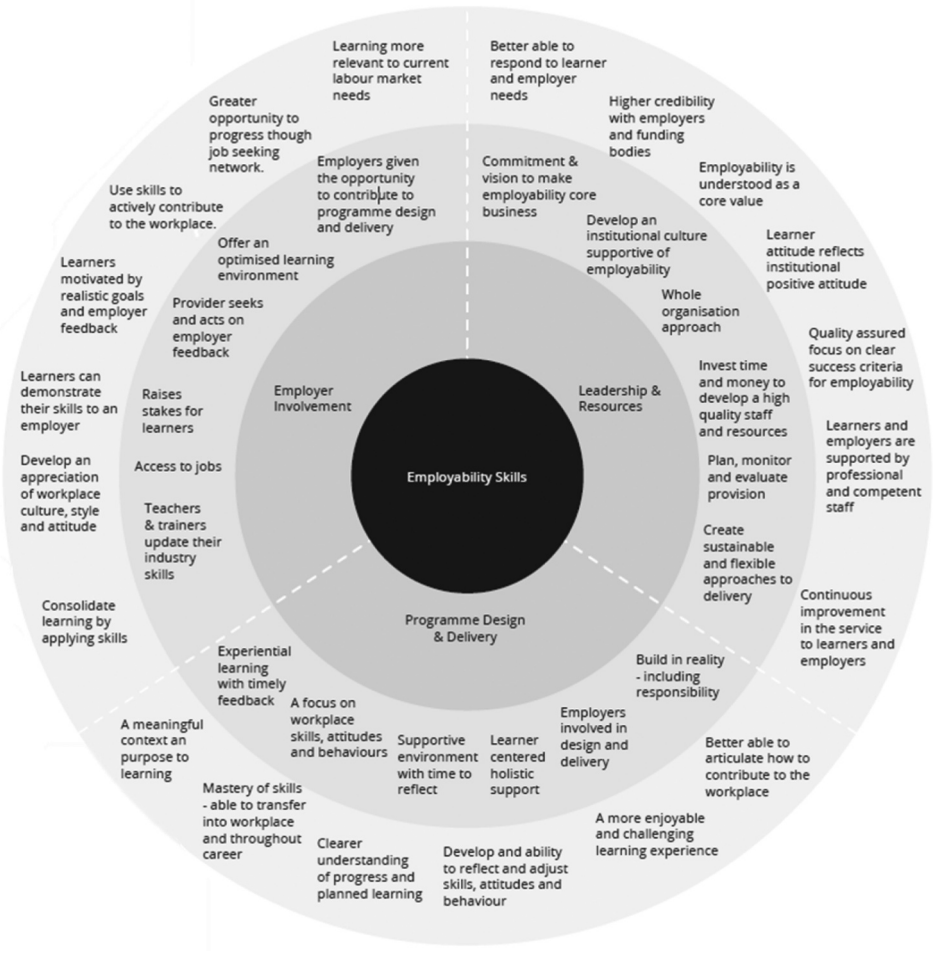

Figure 1. Employability skill wheel by UKCES. Source: UKCES (2009). The employability challenge: Full report. UK Commission for Employment and Skills (UKCES). https://webarchive.nationalarchives.gov.uk/+/http://www.ukces.org.uk/upload/pdf/EmployabilityChallengeFullReport.pdf, p. 17

identified the critical factors, key features and the impact on learners, employers and higher education providers (See Figure 1, UKCES 2009, 17). The model focuses on employer involvement, leadership and resources, and programme design and delivery as three leading dimensions that universities should consider whilst building bolt-on employability aspirations.

In addition to this framework, Cole and Tibby (2013) provide a series of guidelines to develop a comprehensive institutional approach regarding employability. Moreover, the study also highlighted the need to develop a quality assurance system to continuously improve employability initiatives with a four-step reflective process comprising of 'discussion, reflection, action and evaluation' (Cole and Tibby 2013, 5).

In theory and practice, the rationale for university employability aspirations would be 'underpinning and strengthened via the curriculum reform, extra-curricular interventions and support services and employer engagement' (Blackmore et al. 2016, 7). Considerable literature illustrates that higher education institutions exert significant efforts to develop bolt-on employability, in order to reduce the mismatch of expectation (Blackmore et al. 2016). As the primary agent responsible for ensuring student learning outcomes, it is incumbent upon universities to adopt applicable strategies and initiatives to resolve concerns addressed by society and employers (King 2003).

2.3 Conceptual framework: employability measures of global rankings and EQA

Regardless of different purposes and functions, rankings and quality assurance are considered two of the strongest quality measures globally. University rankings measure institutions on the basis of their performance by selected quantitative indicators, such as number of publications, ratio of staff and students, number of international students and faculty members (Hou et al. 2014). By contrast, 'external quality assurance is a process that uses people external to the programme or institution to evaluate quality or standards' due to reviewed subject's mission and purpose (International Network for Quality Assurance Agencies in Higher Education (INQAAHE) 2019, 1). Teaching and learning are two key dimensions under either institutional or programme reviews (Hou et al. 2014). Notably, quality assurance agencies would apply a fitness for purpose approach consisting of self-assessment, peer review and onsite visit into external reviews. All institutions are required to present their academic outputs and outcomes in self- assessment report and submit it to accreditor before on-site visit.

Development of employability indicators in global rankings

In recent years, QS and Times Higher Education published the new global rankings entitled 'QS Graduate Employability Rankings (GER)' and 'Global University Employability Rankings' respectively with a focus on employability. Published in 2017, the newest version of the QS Graduate Employability Rankings (GER) was designed to inform the general public how higher education qualifications would support student employment (QS, 2019). The aim of the Times Higher Education ranking system was to identify which 'universities the recruiters at top companies think are the best at preparing students for the workplace' (Times Higher Education 2019, 1). Both Employability Rankings are the most popular and well-known by companies and business (Emerging 2019).

QS's GER designed five criteria to measure the short- and long-term advantages that students might gain from attending a specific university. These included employer reputation, alumni outcomes, partnerships with employers per faculty, employer/student connections and graduate employment rate. Among them, the highest weighting was devoted to the results of the QS employer survey, forming part of QS World University Ranking since 2005, and which is also a core component of QS subject rankings. The 2019 survey counts over 45,000 completed responses with a weight of 30% (Quacquarelli Symonds Limited (QS) 2019).

Employer–university links aim at measuring research partnerships with industry, weighted at 25%, by 'counting the number of research papers produced by joint authors from industry and university' (QS 2019). A further 25% comes from the alumni survey with a global look at the alma mater of senior figures in industry, politics, the arts and other sectors. The last two measures are each weighted at 10%. The first is employer–student connections, a way of gauging how much employers involve

themselves in events such as student recruitment fairs that bring them onto the university campus. Graduate employment rate, the last measure, is to assess how likely a graduate is to be employed a year after graduation. The revision for the average rate in each country is made to avoid penalising a good university in an economically-stricken nation (Table 1).

In 2017, Times Higher Education also published Global University Employability ranking based on a global survey of around 3300 recruiters, in 23 countries, and 8000 international managers from major businesses (Times Higher Education 2019; Emerging 2019). Around 150 institutions are listed worldwide for international employability. In general, QS and THE rankings have paid increasing attention to employability in recent years. Employers' opinions towards graduates' performance are adopted as one of the major measures for university quality.

Standards and Concepts of Employability from QA perspectives

Similar to global ranking, national quality assurance agencies include specific standards in external reviews, particularly Quality Assurance Agency for Higher Education (QAA) UK, Tertiary Education Quality and Standards Agency (TESQA) Australia, and HEEACT Taiwan. These have all developed various student learning outcome-based standards in relation to graduates' employability. Established in 1997, the QAA acted as a not-for-profit agency via the integration of partial functions from the former Higher Education Quality Council and the quality assessment divisions of The Higher Education Funding Council for England (HEFCE) and The Higher Education Funding Council for Wales (HEFCW) (HEFCE 2016). In 2016, Department for Business, Innovation & Skills (BIS) published the White Paper titled 'Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice', built Teaching Excellence Framework (TEF) and set up a new organisation, Office for Students (OfS) to monitor quality of UK higher education providers. In 2017, QAA was designated as a quality body by OfS, and carried out review tasks with a risk-based approach. As the Executive Chief of QAA stated, 'in a changing UK context with different approaches in different nations, we'll need to evolve our understanding of what co-regulation means, to incorporate the interests of multiple stakeholders, from students, employers and professional bodies, to our wider society' (QAA 2018, 1).

To ensure that higher education providers meet minimum standards locally and internationally, promote best practice and improve the quality of the Australian higher education sectors, a new regulation and QA agency, called Tertiary Education Quality and Standard Agency (TEQSA), was established by the Government in response to the Bradley Review (TEQSA 2018, 1). TEQSA was expected to act as 'a robust quality assurance and regulatory framework with an emphasis on student outcomes and the quality of the student experience' (The Tertiary Education Quality and Standards Agency (TEQSA) 2018, 1). It not only 'carried out evaluations of standards and performance, assure the quality of international education, but also register providers' throughout a regulatory framework (Rowlands 2012, 101)

Taiwan's quality assurance system was not formed until HEEACT was established in 2005. HEEACT, as the national accreditor, is mandated to ensure the activities of local universities adhere to established quality standards and accountability according to University Act. By 2019, more than 85 institutions and more than 3000 programmes were under HEEACT's review, and their detailed final reports were published on the official website (HEEACT 2018).

Echoing the request from industry, three agencies embedded a 'concept of employability' as part of the standards framework. In QAA UK quality code, the standard titled 'student support' stated that 'employability' is understood as a process of learning with attributes developed in stages and explicitly linked to academic and industry attributes'. Throughout 'programme delivery', students would have 'opportunities to develop professional skills and experience throughout their life cycle' (QAA 2019, 8). In the standard of student participation and attainment by TEQSA Australia review, stipulated that universities should set requirements for student admission, requirements for adequate academic preparation for the course and any credit granted for prior learning. Success rate, assessment on expected learning outcomes, highlights value of employability (The Tertiary Education Quality and Standard Agency (TEQSA) 2017, 14).

Table 1. QS Graduate Employability Rankings (GER) and times global university survey.

QS			Times HE
Indicators	Weights	Definition	
Employer reputation	30%	45,000 responses to the QS Employer Survey	3 300 recruiters in 23 countries and 8000 managers gave 91 000 votes to rate more than 5000 institutions in terms of employability
Alumni outcomes	25%	the alma mater of senior figures in industry, politics, the arts and other sectors	– –
Partnerships with Employers per Faculty	25%	the number of research papers produced by joint authors– from industry and university	– –
Employer/Student Connections	10%	Student recruitment fairs that bring them onto the university campus	– –
Graduate Employment Rate	10%	A graduate is to be in work a year after graduation	– –

HEEACT launched the new cycle of programme review in 2017. One of three standards, 'Student and Learning', consists of four indicators, including 'Management of student enrolment and retention', 'Course-related learning and support systems', 'Other forms of learning and support systems', and 'Student/graduate learning outcomes and feedback'. In general, institutional action plans and initiatives to help students understand the job market as well as enhance their professional aptitudes are highly recommended by HEEACT. For example, universities shall be responsible for preparing students to seek a job by providing students with internship opportunities and visits to business and job fairs. In addition, universities are supposed to provide career development services, including counselling, aptitude tests, granting access to alumni and industry resources and assisting students obtain certifications (HEEACT 2017) (Table 2).

Conceptual Framework for implication of 'concept of employability' into institutional strategies under 'Glonacal' system of higher education

Inevitably, institutional policies, strategies and action plans would be affected by employability's concept, standards and indicators derived from global rankings and QA. The five dimensions in employability, identified as analytical themes are as follows (1) employment/employability, (2) industry-university collaboration, (3) innovation and entrepreneurship, (4) internship (overseas and local), and (5) career planning and services.

Under a 'Glonacal' system of higher education, proposed by Marginson (2011), national educational policymakers, institutions and individuals are supposed to interact and respond to external forces throughout internal transformation process severely (Marginson 2011). According to Marginson (2011), the institution itself is a local organisation, compared with a national dimension, referring to national culture, polity and polices. Reliance on the level of support from national government, means institutions are likely to develop or falter at the global level. Nowadays,

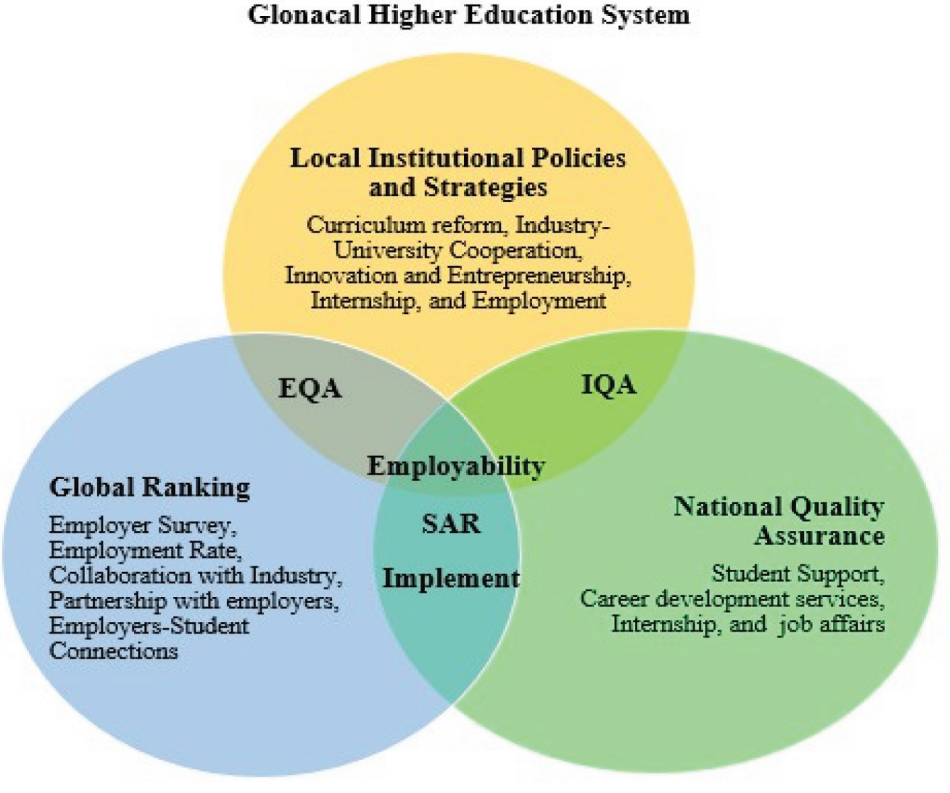

Figure 2. Conceptual framework for implication of 'concept of employability' from EQA and IQA standards under glonacal HE system.

Table 2. Standards and indicators of employability by three QA agencies.

	QAA (UK)	TEQSA (Australia)	HEEACT (Taiwan)
Standards	Student support/ Programme delivery	Student participation and attainment	Student and learning
Core Indicators	To encourage employers in: -Engaging employers in quality assurance procedures. -Promote work placements and paid internships.	Engagement framework (employers) in response to risk-based quality assurance activities and the promotion of placements, internships and networking event to promote employability.	Management of student enrolment and retention', 'Course-related learning and support systems', 'Other forms of learning and support systems', and 'Student/ graduate learning outcomes and feedback
Institutional policy and initiatives	Universities shall develop employability strategic plan, engage with employers on course design, programme reviews, develop practical support and advice for students	Universities shall set requirement for student admission, requirements for adequate academic preparation for the course; any credit granted for prior learning. Success rate, assessment on expected learning outcomes	Universities shall prepare students with internship opportunities, visits to businesses and attending job fairs, and career development services etc.

institutions are learning to integrate and balance the needs of varying stakeholders, including local students, national governments and global markets, comprising the three dimensions into a 'glonacal' sphere of higher education (Lo, Wai, and Hou 2019; Hou, et.al, 2021).

As discussed, a conceptual framework for implication of 'concept of employability' from 'global' ranking and 'national' QA perspectives into 'local' institutional polices and strategies under 'Glonacal' system of higher education in the study is illustrated as above (Figure 2).

3. Research design and methods

This study adopted a qualitative approach to explore the implication of the employability concept in institutional policymaking and initiatives launched in Taiwanese higher education, and in accordancewith standards of QS employability ranking and (Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT) 2017) programme accreditation. Under this stratified higher education system, five types of institutions were selected for this study, including five research-oriented, five teaching vs research, three quality enhancement, and four professional schools in arts, sports and education and three religion affiliated institutions according to HEEACT classification and location. In total, twenty higher education institutions in Taiwan were purposively selected as research subjects according to their mission and location. In Taiwan's context, research-oriented institutions are categorised as top-tier universities, followed by teaching vs research, professional schools in arts, sports and education and religion affiliated institutions, and quality enhancement types.

Document analysis is an approach used to gather and review the content of existing written documentation related to the study to extract pieces of information in a rigorous and systematic manner (Institute of Development Study 2013). Three types of data and documents of 20 selected universities, including QS ranking results, institutional strategic plans and self-assessment reports were analysed and extracted according to the following identified themes: (1) employment/employability, (2) industry-university collaboration, (3) innovation and entrepreneurship, (4) internship (overseas and local) and (5) career planning and services.

The study applied MAXQDA, a software system for qualitative research and texts analyses, to identify the related segments from 40 documents. After processing and reviewing, 2,489 data segments related to five identified themes were extracted. Moreover, to facilitate data analysis, the selected higher education institutions were given a shortened code in relation to their type first. Then, 'S' would be added to identify the document of strategic plans; and 'A' is for the self-assessment report (Bazeley and Jackson 2013) (see Table 3)

Table 3. Code of the documents by the selected HEIs.

Top Universities (RU)	Research	Teaching and Research Universities (TRU)		Quality Enhancement Universities		Religious Institutions		Professional schools of Arts, Sports, and Education (ASE)	
RUS1	RUA1	TRUS1	TRUA1	QEUS1	QEUA1	RPMS1	RPMA1	ASES1	ASEA1
RUS2	RUA2	TRUS2	TRUA2	QEUS2	QEUA2	RPMS2	RPMA2	ASES2	ASEA2
RUS3	RUA3	TRUS3	TRUA3	QEUS3	QEUA3	RPMS1	RPMA1	ASES3	ASEA3
RUS4	RUA4	TRUS4	TRUA4					ASES4	ASEA4
RUS5	RUA5	TRUS5	TRUA5						

Source: Authors

4. Major findings

4.1 Results and performance in QS global ranking

Only four out of the 20 selected institutions in the study are ranked highly in the 2019 QS Graduates' Employability ranking. These institutions all belong to the research-intensive type, including National Taiwan University, National Chiao Tong University, National Cheng Kung University and National Tsing Hua University. This outcome in global rankings also reflected in the argument by Brown, Lauder, and Cheung (2019), indicating that university reputation would influence employability. Over consecutive 4 years, National Taiwan University is ranked among top 100 worldwide and top 1 in Taiwan, followed by National Chiao Tong University and National Cheng Kung University (Table 4)

As shown in the Table 5, National Taiwan University scores the highest in indicators of employer reputation, alumni outcome and partnership with employer. In particular, it has an excellent performance with regard to 'alumni outcomes'. In addition, three Taiwanese universities have good scores for the indicator 'employer–student connection'. Thus, universities are likely to develop related policies and strategies to promote the standards. National Chiao Tong University is the only institution with scores in all the five criteria (Table 5).

Table 4. Graduate employability ranking (2017–2020).

	Graduate Employability Ranking			
HEIs	2017	2018	2019	2020
National Taiwan University	61	101	81	56
National Chiao Tong University	151	161	141	141
National Cheng Kung University	101	161	171	161
National Tsing Hua University	201	301	301	251

Source: Authors retrieved from QS Graduate' Employability Ranking (2019)

Table 5. Graduate employability ranking – employability indicators (2020).

	Employability Indicators (2020)					
HEIs	Overall Score	Employer Reputation	Alumni Outcome	Partnerships with Employers	Employer - Student Connection	Graduate Employment Rate
National Taiwan University	68.1	70.8	94.9	58.2	*	*
National Chiao Tong University	46.4 – 48.4	37.8	38.1	45.3	65.9	67.4
National Cheng Kung University	43.7–44.6	37.6	*	54	98.5	*
National Tsing Hua University	27.6–32.2	45	*	*	70.4	*

Source: Data obtained from QS Graduates' Employability Ranking Database (QS Global Ranking, 2019). * Score not available in the database.

4.2 Analysis over strategic plans

Employment/Employability and Industry–University Cooperation are the two leading dimensions in institutional strategic plans

A review of 20 institutional strategic plans showed that 20 selected institutions indicated specific strategies in promotion of 'industry-university cooperation' in their strategic plan, with a coverage ratio of 29.94% out of 668 extracted segments. A total of 19 institutions with a coverage ratio of 27.99% clearly stated 'employment/employability' as part of institutional strategic plan. In comparison, 17.81% and 15.72% are in standard of 'innovation and entrepreneurship', respectively. Surprisingly, 'career planning' in strategic plans has the lowest rate, 8.53% (Table 6).

Research-oriented universities developed a well-balanced strategic plan in employability

When it comes to type, research-oriented universities have better outcomes in the five dimensions, followed by professional schools in arts, sport and education and quality enhancement institutions. The result is equivalent to the global ranking result. Professional schools regard 'employment' and 'employability' as one of significant strategies in institutional short- and long-term plans. In addition, quality assurance, as well as teaching and research institutions, pay great attention to strengthen collaboration between university and industry. Relatively, religious institutes identify specific strategies to enhance employability (Figure 3).

A deep analysis of the policies and strategies show that the five types of universities have various foci. Take research oriented universities for example. Their institutional strategic plans tended to put stress on internationalisation and multicultural and linguistic learning

> University would provide international collaborative programmes and courses with students. Throughout partnership with well-known foreign institutions, faculty members would offer courses and supervise students jointly to enhance student international employability (RUS4)

Table 6. Number and percentage of related extracted segments in strategic polices and plans.

Dimension	HEIs	No. of extracted segments	% of extracted segments of all documents
Employment/Employability	19	187	27.99
Industry-University Cooperation	20	200	29.94
Innovation and entrepreneurship	17	105	15.72
Internship	17	119	17.81
Career Planning and services	12	57	8.53

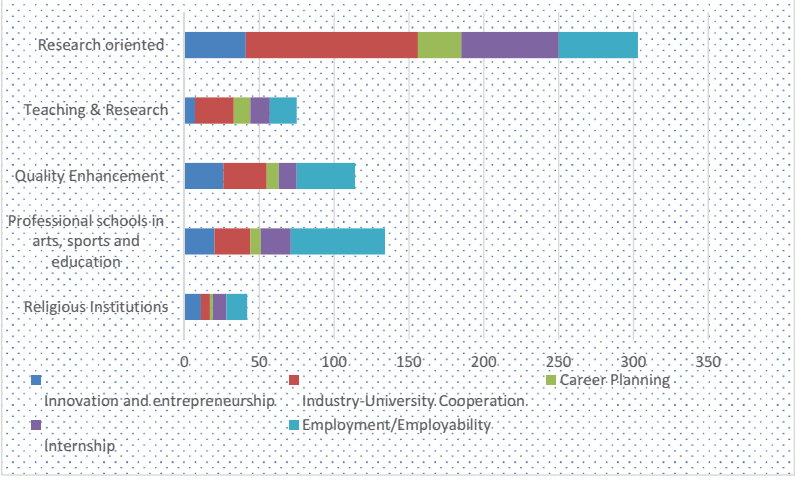

Figure 3. Number of extracted segment of institutional strategies by types and criteria.

> Our goal to equip students with international competitiveness in the global market (RUS 2)

> University would offer various foreign languages and create an international learning environment, hoping to enhance students' employability (RUS3)

By contrast, quality assurance typed institutions emphasise that student employment would depend on local community engagement. One of them indicated accordingly in the strategic plan,

> University would reform the industry–university cooperation mechanism. It is expected to prepare students to search a job according to current local market demand. Besides, university would establish a 'cross-disciplinary faculty team' to support student employment in Taiwan society (QEUS1)

The other two quality assurance institutions proposed to deepen the partnership with local businesses and expected to achieve a highest level of employment rate

> Collaborating with top business in Taiwan and ensuring student employment are two main features of University. Student support and career development, capstone courses, internship and job search guidance are institutional strategies (QEUS2)

> As local business would impact employment rate, University would develop related employability programmes (QEUS3)

Teaching & Research type institutions focus highly on career planning and service and industry–university collaboration

Teaching and Research type institutions develop a comprehensive career planning and services mechanism and consider career development as part of regular curriculum. Take one prestigious Teaching and Research institution for example. It required that all freshmen take career planning and counselling courses and use career and employment assistance systems (CVHS) in relevant courses.

> University integrates CVHS into the related courses and assists students in career development and planning. University would customise individual career counseling and support according to varying student needs and current employment system. Tutorial system would be part of career development, support and services system (TRUS4).

Comparing other types of institutions, Teaching and Research institutions have clear objectives and specific strategies via teaching activities and research projects to strengthen university and industry collaboration.

> University would strengthen partnership between school and industry from perspectives of mutual benefits and cooperation. Most importantly, all activities and cooperation would contribute to teaching quality and research outputs. Based on the partnership and consortium, innovation and research fields would be identified and local and global talents would be nurtured successfully (TRUS1).

> Mission of our school is to strengthen the link and mutual benefits among government, industry and academia. We would make great efforts to produce the outputs and international collaborations (TRUS5).

Notably, innovation and entrepreneurship are greatly emphasised by professional schools in arts, sports and education to respond to student needs

As Blackmore et al. (2016) indicated, 'entrepreneurship is the process of applying enterprise skills to create and grow organisations in order to identify and build on opportunities' (Blackmore et al. 2016, 29), graduates in arts, sport and education fields tended to take an opportunity to develop their own business. Take one University of Arts and Sports for example, its strategic plans stated,

> We established a four-year entrepreneurship scheme for undergraduates. The first and second year students would learn professional and interdisciplinary knowledge and skills; in the third year, students are encouraged to develop their innovation and creativity capacity. They should try to apply knowledge and skills into practices. At the last mile, they would be fully supported to take part in U-Start programme of Youth Development Administration, Ministry of Education (ASES1).

> There are three major phases for innovation and entrepreneurship in our campus, first, establishment of incumbent centers; second, integration and knowledge transfer of research outcomes, finally, encouragement of entrepreneurship (ASES3)

> In particular, University of Education launched seminars of entrepreneurs and entrepreneurship to inspire students' potentials and insights over innovation, creativities and entrepreneurship (ASES4).

Religion affiliated institutions still provide good internship programme with students

Seventeen out of 20 institutions identify the action plans for internship programmes, including three religion affiliated institutions. Not being limited by nature, religion typed institution include specific internship policies and strategies in the institutional development plan. For example, one of them stated clearly seven KPIs for internal scrutiny.

> Seven KPIs examine outcomes of internship programme, including signing internship programme agreements with at least 60 business and companies, completion of 80 professional internships, 95% internship programme on site visit, 100 % updating graduate tracking system, conducting graduate survey after one year graduation and after three years, and holding Alumni Network Meeting annually (RPMS3).

4.3 Analysis over institutional self-assessment reports

A review of the content of 20 institutional self-assessment reports showed that 20 selected institutions turned policies and strategies into actions and implemented them in three main dimensions, namely, employment/employability, industry and university cooperation and internship. A total of 1572 extracted segments indicated their performance and accomplishment, with a coverage rate of 38.17%, 33.94%, and 14.28%, respectively. By contrast, the dimension of career planning and services has a lowest coverage rate, with a number of 32 extracted segments and 1.76% (See Table 7)

When it comes to outcomes and differentiation according to type and dimension, Teaching and Research institutions performed as well as research oriented ones, followed by professional schools and religion affiliated institutions. Unsurprisingly, quality assurance institutions were left behind with lesser outcomes (Figure 4).

Research-oriented institutions have great outputs on the dimensions of industry and university cooperation and employment, the same as the global ranking results in the criteria 'Employer–Student Connection' and 'Alumni outcomes'. Their self-assessment reports presented these achievements,

> In collaboration with government, our school successfully was granted by national project on University and Industry Consortium. In total, we were funded 30 projects from 2015 to 2018. In 2017, University was awarded as the best university on collaboration between university and industry by Chinese Institute of Engineers. Over past three years, income from industry reached to USD 227 million (RUA1).

> Our school has become member of International Network for University and Industry Collaboration. Annually, the total amount of industry income is around USD 100 to USD 120 million, ranked top 1% around the world according to THE global ranking (RUA2).

> Average salary of graduates after graduation from the 1st to the 4th year, from year 1 to year 4 is up to USD 1300 per month, much higher than other universities (RUA1).

Table 7. Number and percentage of extracted segments in institutional self-assessment reports.

Dimensions	HEIs	No of extracted segments	%extracted segments among all documents
Employment/employability	20	695	38.17
Industry-university cooperation	20	618	33.94
Internships	20	260	14.28
Innovation & entrepreneurship	18	216	11.86
Career planning and services	15	32	1.76

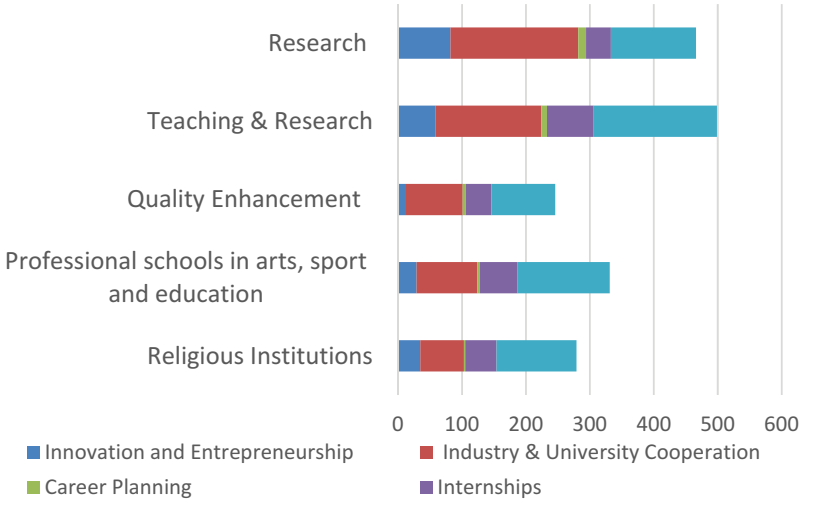

Figure 4. Number of extracted segments of self-assessment reports by type and dimension.

In comparison, Teaching and Research type institutions presented better outcomes on internship policy.

> By integration of 4.0 Industry into internship programme, the faculty members at our school worked with SIEMENS' Research & Development Department in developing new technology (TRUA1).
>
> We provided sufficient support, guidance, and counseling for the students at the internship programmes, including pre-internship, during internship and after internship (TRUA1)
>
> Over past three years, there were 15,477 students taking part in internship programme. 2% is international internship (TRUA1).
>
> The aim of international internship programme, as one of institutional polices and strategies, is to promote student employability and mobility. From 2008 to 2017, 471 students after intensive preparation training programme took part in the international internship (TRUA5).

In addition, Professional Schools in arts, sport and education paid attention to 'Innovation & entrepreneurship', but the outcomes remained limited.

> In terms of outcome of 'Creativity, Innovation, and Entrepreneurship' learning programme, faculty members and students jointly yield 52 commercial works over years (ASEA2)

As mentioned earlier, career planning was the dimension least considered among all types of the universities in this study. However, quality enhancement and religion affiliated types did their best to prepare students in the future job market.

> Throughout field trips and visits, students would be provided with an opportunity to talk to companies and business about employment requirement (QEUA2)
>
> Students are provided with customised career development counselling services in order to be employed in the job market (RPMA2)

5. Discussions

5.1 Sampled universities in the study are highly responsive to employability with multi-dimensional approaches

The study shows that the sampled Taiwanese higher education institutions, to a certain extent, embed graduate employability into institutional policies and strategic plans in terms of five dimensions addressed from ranking and national accreditation under the Glonacal higher education system. In addition, a general consensus among higher education institutions that employability skills should be addressed in course design and involvement of employers was reached. Taiwan's experience indeed indicated that universities would enable students to acquire a set of core competencies before graduation throughout academic and internship programmes.

When economic conditions become challenging, universities are pressured to produce 'employable' workers. A growing number of skilled graduates produced by universities have turned the labour market from a 'supplier' into a 'buyer' type. In response to employer's demand, higher education institutions must reform curriculum, design internship programmes, strengthen university and industry collaborations, focus on innovation and entrepreneurship, and engage employers in internal quality assurance process. As Pavlin and Svetlícíc (2012) stated, 'in the coming decade of economic downturn public policy interest in higher education research will continue to follow employability issues. And even though this concept is clearly multidimensional, it will be increasingly determined by higher education's potential to develop competencies' (Pavlin and Svetlicic 2012, 394).

5.2 Does a gap continue to exist between policymaking and implementation?

In the light of the breakdown between education and the labour market, 'employability' has been considered as one of the criterion in rankings and external quality assurance systems to assess accountability of higher education institutions. In response, universities endeavour to integrate the new mission into institutional plans though it has been argued if they divert themselves from their main mission and hold out false promises to students. Taiwan's case demonstrates that universities attempt to reduce this paradox.

Taiwan's higher education institutions had policies in place to prepare students for the job market, but the gap between institutional policy making and actual implementation exists nonetheless. By examining the gap on coverage rate between strategic plan and self-assessment reports, positive outcomes and successful implementation are in place in the dimensions of 'employment/employability' and 'industry–university cooperation'. Moreover, the positive gap in 'employment' is up to 10.18%. By contrast, the institutions made plans and strategies in 'innovation and entrepreneurship', 'internship', 'career planning and services', but they were not implemented as much as planned (Table 8).

Another gap exists by type. Table 9 below shows that Teaching and Research institutions and Professional schools have either better or equivalent outcomes with an excessive number of extracted segments. Hence, both types carried out strategic plans efficiently. Research-oriented, quality assurance and Religion-affiliated institutions still have negative results over the other three dimensions, particularly career planning and services (Table 9). Institutions were likely pressured by global ranking and national accreditation to develop various policies and strategies but lacked understanding of what employability was meant to students, employers and society completely. Nevertheless, it is foreseen that the more competitive the job market is, the more employability will become an issue and concern among Taiwan universities and colleges in terms of how it is carried out actually.

Table 8. Gap between strategic plan and outcomes by coverage rate of extracted segments in terms of dimensions.

Criteria	Strategic plan	Self-assessment /actual implementation	Gap
Employment/Employability	27.99%	38.17%	+10.18
Industry-University Cooperation	29.94%	33.94%	+4
Innovation and entrepreneurship	15.72%	11.86%	−3.86
Internship	17.81%	14.28%	−3.53
Career planning and services	8.53%	1.76%	−6.77

Table 9. Gap between strategic plan and outcomes by number of extracted segments by type.

Gap by Types Criteria	Research-oriented	Teaching & research	Quality enhancement	Professional	Religious
Employment/Employability	140	95	81	111	61
Industry-University Cooperation	50	174	71	60	61
Innovation and entrepreneurship	18	75	9	24	−15
Internship	8	26	39	40	28
Career planning and services	−20	1	−3	0	−3

6. Conclusion

Global attention to graduate employability facilitates institutional policymaking and structural transformation in Taiwanese higher education. The study found that Taiwan universities would apply different approaches to improve employability of graduates and ensure student learning outcomes according to global ranking and national accreditation standards. Research-oriented universities developed a well-round policy, which contributes to better performance in global ranking and national accreditation. Teaching and research institutions tended to focus on industry collaboration and development of career planning system. Quality assurance institutions attempt to safeguard a certain ratio of student employment. Professional schools emphasised the value of innovation and entrepreneurship. Religious institutions still worked hard to respond to the issue by offering internship programme to students.

Typically, it was perceived that universities were not overly familiar with graduate employability required in the job market. In recent years, emergence of global ranking and national quality assurance system pressured universities to situate several employability initiatives in institutional strategic plans and developed a set of predestined outcomes for internal scrutiny.

To sum up, the employability issue has successfully drawn the attention of institutions in Taiwan and has impacted institutional policy making and initiatives accordingly. However, a more comprehensively long-term study over graduate employability is strongly recommended to conduct in the future in order to collect more practical and reliable data of actual outcomes. As Harvey (2001) stated,

'Any evaluation of employability needs clearly to indicate areas for improvement and might be done by internal, longitudinal benchmarking that, over time, compares and evaluates outcomes, like employment of graduates, against input and process such as effort in developing employability opportunities' (Harvey 2001, 108).

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributors

Angela Yung Ch Hou is Professor of Department of Education at National Chengchi University, Taiwan. She also serves as Associate Dean of College of Education.

Christopher Hill is Associate Professor of Faculty of Education at British University in Dubai

Dewin Justiniano is the Research coordinator of office of Administration and Research at Higher Education Evaluation & Accreditation Council of Taiwan

Can Yang is the PhD student of National Chengchi University , Taiwan and lecturer of Jinhua Polytechnic, ChinaQuan Gong is the PhD student of National Chengchu University, Taiwan and lecturer of Wenzhou University, China

Quan Gong is the PhD student of National Chengchu University, Taiwan and lecturer of Wenzhou University, China

ORCID

Angela Yung Chi Hou http://orcid.org/0000-0003-3349-5671

References

Aamodt, P. O., and A. Havnes. 2008. "Factors Affecting Professional Job Mastery: Quality of Study or Work Experience?" *Quality in Higher Education* 14 (3): 233–248. doi:10.1080/13538320802507539.

Abell, P. 1991. *Rational Choice Theory*. Aldershot: Brockfield.

Ashton, D. N., and F. Green. 1996. *Education, Training and the Global Economy*. Cheltenham: Edward Elgar.

Autor, D. 2014. "Skills, Education, and the Rise of Earnings Inequality among the "Other 99 Percent"." *Science* 344 (6186): 843–850. doi:10.1126/science.1251868.

Bano, Y., and S. Vasantha. 2019. "Influence of University Reputation on Employability." *International Journal of Scientific & Technology Research* 8 (11): 2061–2064.

Baruch, Y. 2006. "Career Development in Organizations and Beyond: Balancing Traditional and Contemporary Viewpoints." *Human Resource Management Review* 16 (2): 125–138. doi:10.1016/j.hrmr.2006.03.002.

Bazeley, P., and K. Jackson, eds. 2013. *Qualitative Data Analysis with NVivo*. Newsbury, CA: Sage.

Blackmore, P., Z. H. Bulaitis, A. H. Jackman, and E. Tan. 2016. "Employability in Higher Education: A Review of Practice and Strategies around the World." Retrieved from https://uk.pearson.com/about-us/news-and-policy/reports-and-campaigns/employability-in-higher-education.html

Bridgstock, R. 2017. "The University and the Knowledge Network: A New Educational Model for Twenty-first Century Learning and Employability." In *Graduate Employability in Context*, edited by M. Tomlinson and L. Holmes, 339–358. Palgrave Macmillan, United Kingdom . Retrieved from: 10.1057/978-1-137-57168-7_16.

British Council (2017). 10 trends : Transformative changes in higher education. London, British Council.

Brown, P., H. Lauder, and S. Y. Cheung. 2019. *The Death of Human Capital?* New York: Oxford University Press

Cole, D., and M. Tibby. 2013. *Defining and Developing Your Approach to Employability: A Framework for Higher Education Institutions*. Heslington: Higher Education Academy.

Department of Higher Education. 2011. "Development Plan for World Class Universities and Research Centers of Excellence." Retrieved on 1 April 2019 from https://rusen.stust.edu.tw/cpx/Data/HE.pdf

Diamond, A., L. Walkley, P. Forbes, T. Hughes, and J. Sheen. 2008. "Global Graduates: Global Graduates into Global Leaders." Leicester, England. AGF/CIHE/ CFE. Retrieved from http://www.ncub.co.uk/index.php?option=com_docman&view=download&category_slug=publications&alias=42-global-graduates-into-global-leaders&Itemid=2728

Emerging. 2019. "Methodology-The Global Employability Survey and Ranking." Retrieved from https://www.emerging.fr/survey-en–2018

EUROSTAT. 2019. "Employment Rates of Recent Graduates." Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php/Employment_rates_of_recent_graduates#Disparities_by_educational_attainment_level

Harvey, L. 2001. "Defining and Measuring Employability." *Quality in Higher Education* 7 (2): 97–109. doi:10.1080/13538320120059990.

Harvey, L., and J. Newton. 2007. "Transforming Quality Evaluation: Moving On." In *Quality Assurance in Higher Education*Westerhijden, D. F. , Stensaker, B. & Rosa, (ed), 20: 225–245. Dordrecht: Springer.

Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT). 2017. *HEEACT Programme Accreditation Handbook*. Taipei: HEEACT.

Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT). 2018. *2017 Annual Report*. Taipei: HEEACT.

Higher Education Funding Council for England (HEFCE). 2016. "Revised Operating Model for Quality Assessment." Retrieved 11 November 2018 from http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/2016/201603/HEFCE2016_03.pdf

Hillage, J., and E. Pollard. 1999. *Employability: Developing a Framework for Policy Analysis*. London: Department for Education and Employment.

Hou, A., Y. Chi, T. T.-L. Chiang, S.-J. Chan, and L. Grace I-Jung. 2021."Historical Development of Higher Education in Taiwan from past to Present." In *Higher Education in Taiwan: Global, Political and Social Challenges and Future Trends,* pp. 3-25, edited by A. Yung-Chi Hou, T. T.-L. Chiang, and S.-J. Chan. Singapore: Springer

Hou, A., Y. Chi, C. Y. Kuo, K. H. J. Chen, C. Hill, S. R. Lin, J. C.-C. Chih, and H. C. Chou. 2018. "The Implementation of Self-accreditation Policy in Taiwan Higher Education and Its Challenges to University Internal Quality Assurance Capacity Building." *Quality in Higher Education* 24 (3): 238–259. doi:10.1080/13538322.2018.1553496.

Hou, A., Y. Chi, R. Morse, and C.-L. Chiang. 2014. "An Analysis of Mobility in Global Rankings: Making Institutional Strategic Plans and Positioning for Building World-class Universities." *Higher Education Research & Development* 31 (6): 841–857. doi:10.1080/07294360.2012.662631.

Institute of Development Study. 2013. "Learning about Qualitative Document Analysis." Retrieved on 1 June 2018 from https://opendocs.ids.ac.uk/opendocs/bitstream/handle/123456789/2989/PP%20InBrief%2013%20QDA%20FINAL2.pdf?sequence=4

International Network for Quality Assurance Agencies in Higher Education (INQAAHE). 2019. "Glossary." Retrieved 1 June 2018 from http://www.qualityresearchinternational.com/glossary/

IREG Observatory on Academic Ranking and Excellence (IREG). 2019. "Berlin Principles on Ranking of Higher Education Institutions." Retrieved from http://ireg-observatory.org/en_old/berlin-principles

King, Z. 2003. "New or Traditional Careers? A Study of UK Graduates' Preferences." *Human Resource Management Journal* 13 (1): 5–26. doi:10.1111/j.1748-8583.2003.tb00081.x.

Knight, P., and M. Yorke. 2004. *Learning, Curriculum and Employability in Higher Education*. London and New York: Routledge Falmer.

Lauder, H., P. Brown, and S. Y. Cheung. 2018. "Fractures in the Education–economy Relationship: The End of the Skill Bias Technological Change Research Programme?" *Oxford Review of Economic Policy* 34(3): 495–515. Number, 2018. doi:10.1093/oxrep/gry008.

Li, Z. 2013. "A Critical Account of Employability Construction through the Eyes of Chinese Postgraduate Students in the UK." *Journal of Education and Work* 26 (5): 473–493. doi:10.1080/13639080.2012.710740.

Lo, W., Y. Wai, and A. Y.-C. Hou. 2019. "A Farewell to Internationalisation? Striking A Balance between Global Ambition and Local Needs in Higher Education in Taiwan." *Higher Education*. doi:10.1007/s10734-019-00495-0.

Malaysian Qualification Agency. 2016. *Malaysian Qualification Framework*. Kuala Lumpur: MQA.

Marginson, S. 2011. "Imagining the Global." In *Handbook on Globalization and Higher Education*Roger , K., Marginson, S. & Naidoo, R. (eds), 10–39. Cheltenham: Edward Elgar Publishing.

Mok, K. H., and J. Jiang. 2017. "Massification of Higher Education: Challenges for Admissions and Graduate Employment in China." In *Managing International Connectivity, Diversity of Learning and Changing Labour Markets*, edited by K. H. Mok, 2019–243. Singapore: Springer.

Mok, K. H., and A. Wu. 2015. "Higher Education, Changing Labour Market and Social Mobility in the Era of Massification in China." *Journal of Education and Work* 29 (1): 77–79. doi:10.1080/13639080.2015.1049028.

Mok, K. H., and D. Neubauer. 2016. "Higher Education Governance in Crisis: Critical Reflection on the Massification of Higher Education." *Graduate Employment and Social Mobility, Journal of Education and Work* 29 (1): 1–12.

Mok, K. H., K. M. Yu, and Y. W. Ku. 2013. "After Massification: The Quest for Entrepreneurial Universities and Technological Advancement in Taiwan." *Journal of Higher Education Policy and Management* 35 (3): 264–279. doi:10.1080/1360080X.2013.786857.

Niedermeier, F. 2018. "Designing Effective Quality Management Systems in Higher Education Institutions." Retrieved from http://duepublico.uni-duisburg-essen.de/servlets/DocumentServlet?id=43222

Pavlin, S., and M. Svetlicic. 2012. "Higher Education, Employability and Competitiveness." *Journal of Education* 43: 386–397.

Pologeorgis, N. A. 2019. "Employability, the Labor Force, and the Economy." Retrieved from https://www.investopedia.com/articles/economics/12/employability-labor-force-economy.asp

Prikshat, V., A. Nankervis, J. Burgess, and S. Dhakal. 2019. "Conceptualising Graduate Work-Readiness: Theories, Concepts and Implications for Practice and Research." In *The Transition from Graduation to Work*Dhakal, S., Prikshat, V., Nankervis, A.& Burgess, J. (eds), 15–29. Singapore: Springer.

Quacquarelli Symonds Limited (QS). 2019. "Employability Global Ranking- Methodology." Retrieved from https://www.topuniversities.com/employability-rankings/methodology

Rowlands, J. 2012. "'Accountability, Quality Assurance and Performativity: The Changing Role of the Academic Board." *Quality in Higher Education* 18 (1): 97–110. doi:10.1080/13538322.2012.663551.

Sanders, M., and B. T. Weel (2000). "Skill-Biased Technical Change: Theoretical Concepts." Empirical Problems and a Survey of the Evidence, presented at the DRUID Conference, Copenhagen, Denmark.

Stensaker, B. 2007. "Quality as Fashion: Exploring the Translation of a Management Idea into Higher Education." In *Quality Assurance in Higher Education*Westerhijden, D. F., Stensaker, B. Rosa, M. J. (eds.). , 99–118. Dordrecht: Springer.

Stiwne, E. E., and M. G. Alves. 2010. "Higher Education and Employability of Graduates: Will Bologna Make a Difference?" *European Educational Research Journal* 9 (1): 32–44. doi:10.2304/eerj.2010.9.1.32.

Støren, L. A., and P. O. Aamodt. 2010. "The Quality of Higher Education and Employability of Graduates." *Quality in Higher Education* 16 (3): 297–313. doi:10.1080/13538322.2010.506726.

Teichler, U. 2009. *Higher Education and the World of Work*. Rotterdam: Sense publisher.
The Quality Assurance Agency for Higher Education (QAA). 2018. 2018 QAA annual Conference Chief Executive's Keynote Address. Retrieved from http://www.qaa.ac.uk/about-us
The Quality Assurance Agency for Higher Education (QAA). 2019. "UK Quality Code for Higher Education-Advice and Guidance Enabling Student Achievement." Retrieved from https://www.qaa.ac.uk/quality-code/advice-and-guidance/enabling-student-achievement
The Tertiary Education Quality and Standard Agency (TEQSA). 2017. "Higher Education Standards Framework (Threshold Standards) 2015 – TEQSA Contextual Overview." Retrieved from https://www.teqsa.gov.au/sites/default/files/hesf-2015-teqsa-contextual-overview-v1-1.pdf?acsf_files_red
The Tertiary Education Quality and Standards Agency (TEQSA). 2018. "Official Website." Retrieved from https://www.teqsa.gov.au/about-us-0
Times Higher Education. 2019. "2019 Global University Employability Ranking." Retrieved from https://www.timeshighereducation.com/student/best-universities/best-universities-graduate-jobs-global-university-employability-ranking
Tomlinson, M. 2007. "Graduate Employability and Student Attitudes and Orientations to the Labour Market." *Journal of Education and Work* 20 (4): 285–304. doi:10.1080/13639080701650164.
UK Commission for Employment and Skills (UKCES). 2009. "The Employability Challenge: Full Report." Retrieved from https://webarchive.nationalarchives.gov.uk/+/http://www.ukces.org.uk/upload/pdf/EmployabilityChallengeFullReport.pdf
Wilson, T. D. L. 2012. "A Review of Business–university Collaboration." Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/32383/12-610-wilson-review-business-university-collaboration.pdf
Winterton, J. 2019. "European, American and Japanese Perspectives on Work-Readiness: Implications for the Asia-Pacific Region." In *The Transition from Graduation to Work Dhakal, S., Prikshat, V., Nankervis, A. & Burgess, J. (eds)*, 43–62. Singapore: Springer.
Yorke, M. 2004. "Employability in the Undergraduate Curriculum: Some Student Perspectives." *European Journal of Education* 39 (4): 409–427. doi:10.1111/j.1465-3435.2004.00194.x.
Yorke, M., and P. T. Knight. 2006. "Curricula for Economic and Social Gain." *Higher Education* 51 (4): 565–588. doi:10.1007/s10734-004-1704-5.