

Gaps between competence and importance of employability skills: evidence from Malaysia

Importance of
employability
skills

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Husaina Banu Kenayathulla

Faculty of Education, Universiti Malaya, Kuala Lumpur, Malaysia

Nor Aziah Ahmad

UTM, Parit Raja, Malaysia, and

Abdul Rahman Idris

Universiti Malaya, Kuala Lumpur, Malaysia

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Abstract

Purpose – The purpose of this paper is to identify the gaps between the importance perceived and the competence gained by the hospitality students in terms of the employability skills.

Design/methodology/approach – Questionnaires were distributed to 841 hospitality students in five regions in Malaysia. Descriptive and inferential statistics were used to analyze the data.

Findings – The findings show that there are significant differences between importance perceived and competence attained in teamwork, leadership, basic, technical skills and ethical skills. Additionally, the finding of this study indicates that the culinary and bakery students perceive that they are not given adequate exposure to possess such skills. It is important to ensure that graduates are equipped with the twenty-first century skills such as problem solving and analytic, decision making, organization and time management, risk taking and communication.

Research limitations/implications – The findings provide insights to curriculum developers and policy makers on the appropriate interventions that need to be taken to improve the employability skills of the graduates.

Originality/value – An original contribution is made by linking employability model to TVET sector.

Keywords Skills, Malaysia, Employability, Workforce, Hospitality, TVET

Paper type Research paper

1. Introduction

Malaysia needs high-skilled workforce to support growth of the industry. With dynamically changing job market and progressive technological change, employees are expected to keep abreast of global economics (Singh *et al.*, 2013). In the process of achieving the status of developed nation by the year 2020, Malaysia needs to restructure its workforce to ensure that middle-level workers are highly skilled. Malaysian future workforce has to be able to cope with the changing nature and demands of works. Future workforce needs to acquire the employability skills required by all industries. Technical and Vocational Education can play a major role in providing future workforce with employability skills. Malaysia seeks to expand student enrollment in TVET to support the Government's push for more medium and high-skilled workers under the Economic Transformation Programme. This field now comprises only 25 percent of the workforce (Eleventh Malaysian Plan, 2016–2020). The Eleventh Malaysia Plan aims to boost this workforce to 35 percent, at par with academic and professional graduates (MOF, 2015).



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Malaysia Education Blueprint 2015–2025 (Higher Education) emphasizes that Malaysia needs graduates who are able to successfully navigate complex challenges such as global warming, economic crises and others. Thus, graduates not only required to have the right knowledge and technical expertise, but also the capacity to make ethical decisions and the resilience to deal with rapid change. The 2012 McKinsey Study, Education to Employment, showed that over 70 percent of universities belief that they have adequately prepared students for the workplace. However, only 40 percent of employers' belief students are adequately prepared for workplace.

These skills can be developed with the cooperation of students, higher education institutions, employers and policy makers. As one of key player in enhancing employability, the higher learning institutions need to identify how they can enhance skills of their students. The Ministry of Higher Education (MOHE) in Malaysia has aggressively embarked on a mission to take in students and enhance their soft skills development in order to produce high quality human capital, knowledgeable, competitive workforce that has the creative, innovative features and move in line with industry requirements and social needs of the country. These soft skills such as human relations skills, communication skills, ethical behavior skills and cognitive skills are the attributes that employers consider when reviewing job applicants.

A survey undertaken in 2013 covering final year students who have successfully completed their Industrial Training program was taken to evaluate the employer perspective on the four elements of employment skills based on the generic student attributes established by MOHE such as communication skills, teamwork skills, critical thinking and long-life learning. Evaluation on the performance output generally categorized on the generic skills, give an indication on the feedback and perception on industrial training by the host organizations and students.

Employers often look for a specific set of skills from job-seekers that match the skills necessary to perform a particular job. For instance, financial skills are needed for the position of accountant. But beyond these job-specific technical skills, certain skills are nearly universally sought by employers (Hansen, 2010). It is important for vocational colleges to prepare graduates that meet the required skills for employability. Such skills might vary based on industry needs.

Employability skills is referred to as the skill required to secure and retain a job and recent usage of the term that is often used to describe the training or foundation skills upon which a person must develop job-specific skills. Employability skills are those essential skills necessary for acquiring, keeping and performing well on a job (Shafie and Nayan, 2010). Such skills include managing resources, communication and interpersonal skills, teamwork and problem solving and acquiring and maintaining a job. Employers today emphasize on getting good workers who not only have basic academic skills like reading, writing, science, mathematics, oral communication and listening, but also higher order thinking skills like learning, reasoning, thinking creatively, decision making and problem solving (Shafie and Nayan, 2010). According to Robinson (2006), there is a great demand for educated people with general employability and specialized technical skills. Workers in the twenty-first century need skills such as problem solving and analytic, decision making, organization and time management, risk taking and communication to be employable in the workforce. A study conducted by the Stanford Research Institute and Carnegie Mellon Foundation involving Fortune 500 CEOs found that 75 percent of long-term job success depended upon people skills and that only 25 percent on technical knowledge. Further analysis found that the key traits employers are keen to look for are on the achievement orientation such as self-motivation, proactive, high integrity, reliable, able to work independently with minimal supervision, emotionally stable and able to perform well under pressure.

From the perspective of the production industrial employers, technical graduates master sufficient technical skills, but lack of motivation, interpersonal, critical thinking, problem solving and entrepreneurship skills (Sattar *et al.*, 2010). Husman (2005) contends that 62.3 percent graduates in technical fields are still jobless because they lack of employability skills rather than technical skills required by the industry. In this case, short courses can help upgrade these skills. Hence, Sattar *et al.* (2010) also addressed issues in Mohamed and Mohd (2005) research on polytechnic graduates found that about 50.5 percent technical graduates of Malaysian Polytechnics are jobless for almost nine months of the year because of lack employability skills. He found that these graduates lack competencies in communication, writing and computer skills.

Previous research in Malaysia also indicates that tourism and hotel management program students should demonstrate good communication skills and higher order thinking skills. Most of the curriculum in the hotel management program does not expose students to higher order thinking skills. Students are mostly trained in personal and practical skills. However, students generally lack higher order thinking skills which is important to be effective managers. But, not much empirical research has been conducted for hospitality industry. This research aims to identify the gaps between the perceived importance and competence of culinary and bakery students in terms of employability skills. This study provides insights to policy makers and curriculum developers on the appropriate intervention that needs to prepare future workers in hospitality field.

2. Literature review

Conceptualizing and defining employability skills

Employability skills may be broadly defined as the basic academic, personal and teamwork skills that employers expect from their workers, which are expected to be developed by the educational system. According to Munro (2007), employability skills involve the ability to contribute to work efficiency in an organization combined with good oral and written communication skills and critical thinking, which form the foundation of both academic and workplace success. Bennett *et al.* (2000) argued that employability skills include not only the attributes that are desired from prospective employees but also the basic requirements an individual needs to be considered for employment. These skills are required to perform a task efficiently and to contribute to the growth of an organization. Employability skills are group of skills which help in supporting the ability of an individual to perform effectively in the workplace. It is non-technical skills and sometimes called “transferable skills” or “soft skills” or “generic skills.” The employability skills consist of basic skills, thinking skills, resource skills, information skills, interpersonal skills, system and technology skills and personal qualities (Clarke, 2007). Employability skills are those basic skills necessary for getting, keeping and doing well on a job. Zinser (2003) stated that employability skills include areas such as managing resources, communication and interpersonal skills, teamwork and problem solving and acquiring and retaining a job. Employability skills are those essential skills necessary for getting, keeping and doing well on a job. These are the skills, attitudes and actions that enable workers to get along with their fellow workers and supervisors and to make sound, critical decisions. Unlike occupational or technical skills, employability skills are generic in nature rather than job specific and cut across all industry types, business sizes and job levels from the entry-level worker to the senior-most position (Robinson, 2006).

Overtom (2000) defined employability skills as transferable core skill groups that represent essential functional and enabling knowledge, skills and attitudes required in the twenty-first century to function effectively on the job. Overtom (2000) suggested that employability skills are necessary for success in the job market regardless of the employee's chosen career path, employment level or educational background. Employability skill is a

group of important skills instilled in each individual in order to produce productive workforce (Overtoom, 2000; Kazilan *et al.*, 2009). This is parallel with individuals who have strong characteristics such as a high sense of self innovative, productive, skillful and competitive, a strong sense of determination and creative in facing the challenges of the nation as well as globalization in the twenty-first century. Besides that, employability skill is also crucial in all professions as well as in education. Employability skills are skills that apply across a variety of jobs and life contexts. They are sometimes referred to as key skills, core skills, life skills, essential skills, key competencies, necessary skills and transferable skills.

Workers in the twenty-first century need skills such as problem solving and analytic, decision making, organization and time management, risk taking and communication (Lynch, 2000; Robinson, 2006; Slusher *et al.*, 2010) to be employable in the workforce. Lynch (2000) posited there is a tremendous need to determine what types of skill sets are demanded of TVE graduates by industry because there is a general consensus that occupational preparation should begin sometime in high school.

Core competencies of employability skills

The core competencies required in all work settings. The Conference Board of Canada's Employability Skills Profile identifies three critical skills: academic, personal management and teamwork. Employability skills can be defined as a range of abilities or competencies that you may develop during your life through the education, training, work experience, interests and extra-curricular activities. These skills are often referred to as generic skills, life skills, core skills, essential employment skills, key competencies or transferable skills. Core employability skills build upon and strengthen those skills developed through basic education, such as reading and writing, the technical skills needed to perform specific duties, such as nursing, accounting, using technology or driving a forklift and professional/personal attributes such as honesty, reliability, punctuality, attendance and loyalty. Core work skills enable individuals to constantly acquire and apply new knowledge and skills, they are also critical to lifelong learning.

It is increasingly becoming evident that employability skills make it easier to obtain employment, to remain in it and to adapt easily to the changing demands of the labor market (Riordan and Rosas, 2003). Employers today are looking for workers who are knowledgeable, who get along well with other people, who are able to work as part of a team, who are dependable and reliable, who are eager to learn and who have good written and oral communication skills. Levy and Mumane (2001) use the words "competencies" and "skills" synonymously and have identified the following six key competencies critical to economic success:

- (1) basic reading and mathematics skills;
- (2) the ability to communicate effectively;
- (3) the organization of work within firms;
- (4) teamwork;
- (5) familiarity with computers; and
- (6) formal educational credentials.

Kelly (2007) has identified the following employability skills that make individuals flexible, adaptable and mobile in the labor market. The employability skills are communication, information technology, working with numbers, working with others, problem solving, improving your own learning and performance.

According to Pretorius (2001), the skills sought by employers in the workplace include proficiency in mathematics, computing, reading, writing and reasoning, the ability to use resources and information constructively, interpersonal skills, the ability to understand systems and master technology, as well as the flexibility to cope with changes in the workplace.

The importance of employability skills as opposed to specific skills is clearly underscored by the United States of America's Secretary's Commission for Achieving Necessary Skills (SCANS) report (Department of Labor, 1991), which recommends specific competencies and skills required from someone entering the labor market. The SCANS Report (Department of Labor, 1991) identified the following competencies and foundation skills which are essential for successful employment.

Competencies – effective workers can use these productively:

- resources – allocating time, money, material, space and staff;
- interpersonal skills – working in teams, teaching others, servicing customers, leading, negotiating and working well with people from culturally diverse backgrounds;
- information – acquiring and evaluating data, organizing and maintaining files; interpreting and communicating and using computers to process information;
- systems – understanding social, organizational and technological systems, monitoring and correcting performance and designing or improving systems; and
- technology – selecting equipment and tools, applying technology to specific tasks and maintaining and troubleshooting technologies.

Foundation skills – here competence requires:

- basic skills – reading, writing, arithmetic and mathematics, speaking and listening;
- thinking skills – thinking creatively, making decisions, solving problems, seeing things in the mind's eye, knowing how to learn and reason; and
- personal qualities – individual responsibility, self-esteem, sociability, self-management and integrity.

Previous literature revealed common trends in employability skills sought by employers in respective countries. Employability skills such as problem solving, working in teams, managing information, numeracy, communication and using technology all feature as important in the workplace and represent those skills that employers require from workers.

Employability studies from developed and developing countries

Studies of competencies needed by hospitality graduates have adopted multiple models to define and categorize specific knowledge, skills and attitudes or attributes (KSAs) essential for success. Sandwith (1993) suggested that a competency domain model could be used to determine job performance requirements, with the resulting job profiles then guiding the design and development of training programs. He identified five areas of managerial competencies:

- (1) Conceptual/creative – cognitive skills associated with comprehending important elements of the job and generating ideas for action.
- (2) Leadership – skills in turning ideas into action.
- (3) Interpersonal – skills necessary to interact effectively with others for communication and related skills, including oral presentation, telephone, conflict management and negotiating skills.
- (4) Administrative – skills in the personnel and financial management of the business.

- (5) Technical – knowledge and skills associated with the actual work that the organization does.

Other studies have used both more complex and simpler models to categorize KSAs. Chung-Herrera *et al.* (2003) constructed a model using eight overarching factors divided into 28 dimensions and 99 specific behavioral competencies, whereas Tesone and Ricci (2005) simply used the three areas of KSAs to categorize the 41 items they studied. A two-category competency model used in a number of studies (Banupriya, 2011; Mitchell *et al.*, 2010; Shub and Stonebraker, 2009) but rarely used in the hospitality field (Spowart, 2011) divides KSAs into hard and soft categories. The majority of these studies define hard competencies as a combination of technical and/or cognitive knowledge and skills and soft competencies as personal behavioral attributes, values or traits, including ethics, communication, leadership, interpersonal and teamwork skills (Banupriya, 2011; Ling *et al.*, 2000; Mitchell *et al.*, 2010; Shub and Stonebraker, 2009; Sutton, 2002; Towner, 2002). James and James (2004) defined hard skills as task-oriented competencies learned through education and/or training and soft skills as aspects of attitude and emotion that are demonstrated through effective communication and interaction with customers and employees. A review of the literature in the hospitality industry finds that numerous hard and soft competencies have been identified as important for hospitality program graduates, with soft competencies most often considered more essential than hard ones (Su *et al.*, 1997; Chung, 2000; Connolly and McGing, 2006).

More recently, Whitelaw *et al.* (2009) concluded that academicians are pushing for the development of higher order skills such as critical thinking, management and strategy development, whereas the industry places a greater emphasis on frontline supervisory and interpersonal skills. Finally, Spowart (2011) suggested that key competencies necessary for success in the work environment, identified as soft skills such as customer service and communication skills, should be included and assessed as part of the hospitality curriculum. In summary, most but not all studies found that competencies in listening, communication, human relations, leadership and management of others were most important for success. A few studies found leadership and interpersonal competencies to be of lesser importance than being adaptable to a changing environment or possessing strong financial competencies. Even fewer studies identified working knowledge of the product as essential for managerial success.

Most studies in Malaysian literature consistently show that the highest ranking employability skills from an employer's perspective was communication skills (Azian and Mun, 2011; Rahmah *et al.*, 2011; Rasul *et al.*, 2010; Zubaidah and Rugayah, 2008). Islam *et al.* (2013) found that there are 13 attributes perceived as important by Malaysian employers, but their satisfaction levels for business-related field graduates are low. Those attributes are the ability to encourage and motivate others, manage others, search for and manage relevant information from various resources, to write effectively in English, to speak fluently in English, to present a project effectively, to express own ideas clearly, effectively, and with confidence; to recognize and analyze problems, to explain, analyze and evaluate data/information, to generate creative ideas, to think critically, to think out-of-the-box and to make logical conclusions by analyzing relevant data.

Husain *et al.* (2014) developed and validated employability model for Malaysian engineering students. The model consists of the following constructs: critical thinking and problem-solving skills, lifelong learning and information management skills, communication skills, teamwork skills, technology utilizing skills, entrepreneurship, leadership, ethics and moral, social skills and spirituality. Overall, both Malaysian and international literature shows that technical and generic skills are important for employees. But, Malaysian literature mostly focuses on undergraduates in general. However, it is important more research in Malaysian context for technical and vocational education students.

3. Methodology

In this study, employability skills are categorized under 15 major components based on Mayer Key Competencies model: communication skills, teamwork skills, problem-solving skills, initiative and enterprise skills, planning and organizing skills, self-management skills, learning skills, technology skills, leadership skills and entrepreneurship skills. This framework is also linked to the framework developed by Jelas and Azman (2005). In this study, the generic skills consist of ten skills: communication, numeracy, IT, learning how to learn, problem solving, working with others and subject-specific competencies (Jelas and Azman, 2005; Bennett *et al.*, 2000; Cornford, 1999). The major 15 employability skills consist of communication skills, teamwork skills, problem-solving skills, initiative and enterprise skills, planning and organizing skills, self-management skills, learning skills, technology skills, entrepreneurship skills, leadership skills, basic skills, learning how to learn, working with others, ethical and professional moral, technical and vocational skills.

Participants

The participants consisted of final year students in a bakery and culinary program. Stratified sampling was used to select students in these hospitality programs from 22 vocational colleges in Malaysia. The researcher personally visited the vocational colleges and follow up the official approval about her intentions with the Principal of the vocational colleges. After confirmation with the teacher of the colleges, the researcher started to distribute the questionnaire to the students according to their courses (bakery and culinary). Questionnaires were distributed to 841 students in five regions in Malaysia. In general, the respondents spent 30 min to 35 min to respond the questionnaire completely. Descriptive analysis and paired sample *t*-test was conducted to analyze the data.

Assessment tool

Researchers designed the questionnaire for the final year students. The instrument for the study consisted of two sections: demographics and employability skills. Part A of the student questionnaire consists of demographic information including gender, race, household income, parental education and current CGPA. While Part B measures the employability skills of the students and it contains 150 items adapted from generic skills questionnaire developed by the SCANS (1991), Sattar (2009), Md Tahir (2010), Soft Skills (MOHE, 2006) and MQF (2005) including communication skills, teamwork skills, problem-solving skills, initiative and enterprise skills, planning and organizing skills, self-management skills, resource management skills, technology skills, leadership skills and basic skills. However, based on the literature review, other skills that are included are entrepreneurship skills, learning how to learn, working with others, technical and vocational skills, ethical and professional moral skills.

Questionnaire was validated by experts in the field such as hospitality professor in technical university, lecturers in private colleges and also industrial management. The assessment used a Likert scale format, with the following choices. Sample questions are as below.

The quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 20.0 for Windows. The main types of data analysis for both measurement level of competence and level of important in employability skills were obtained from a five point Likert scale. The score rating of employability skills were stated in Tables I and II.

Instrument reliability

In this research, a Cronbach's α was used to determine the reliability coefficients of the instruments. As Pallant (2005) suggested that Cronbach's α coefficient of construct should be at least 0.7. However, if a domain consists of fewer than ten items, Cronbach's α 0.6

is acceptable. In this study, α value 0.7 and above was determined to be acceptable for each domain. In addition, Haier *et al.* and Pallant (2005) advised a good corrected item at 0.30 and above is accepted as a good item to measure what they had expected to measure.

Table III shows the reliability (Cronbach's α) of 15 domains in the employability skills survey.

4. Findings

Sample demographics

This researchers collected data from 841 vocational students who were in hospitality field at (how many) Vocational Colleges in Malaysia. The return rate for data collection was 63.7 percent.

Table I.
Likert scale of
the questionnaire

1. Level of competency	1	2	3	4	5
	No level of competence – no experience in the skill area	Low level of competence – little experience in the skill area	Average level of competence – some experience in the skill area	Moderately high level of competence – good experience in the skill area	High level of competence – extensive experience in the skill area
2. Level of importance	1	2	3	4	5
	Not very important	Not important	Neutral	Important	Very important

Table II.
The sample
questions for
communications skills

No.	Items	Level of competency					Level of importance				
		1	2	3	4	5	1	2	3	4	5
1	COMMUNICATION I am able to interact with customers in a polite and friendly manner										
2	I am able to ask questions and actively listen to customers to determine their needs										

Table III.
Cronbach's α of
instrument at
vocational colleges

Employability skills	Item	Cronbach's α
Communication skills	10	0.87
Teamwork skills	10	0.85
Problem-solving skills	10	0.79
Initiative and enterprise skills	10	0.78
Planning and organizing skills	10	0.80
Self-management skills	10	0.83
Resource management skills	10	0.75
Technology skills	10	0.92
Leadership skills	10	0.79
Basic skills	10	0.78
Entrepreneurship skills	10	0.80
Learning how to learn	10	0.83
Working with others	10	0.72
Ethical and professional moral skills	10	0.79
Technical and vocational skills	10	0.78

Table IV presents the respondent's profile according to gender, ethnicity, CGPA, father's occupation, mother's occupation, family income, location, program, internship upon graduation and internship with industry.

In addition to the questionnaire, the differences between importance and competence of employability skills among bakery and culinary students are explored using a paired sample *t*-test. The paired sample *t*-test, sometimes called the dependent sample *t*-test, is a statistical procedure used to determine whether the mean difference between two sets of observations is zero. In a paired sample *t*-test, each subject or entity is measured twice, resulting in pairs of observations. The analysis report and the discussion in this part aim to answer the research question.

	Frequency (<i>n</i>)	Total (<i>n</i>)	Percentage	Total (%)
Gender		841		100
Male	347		41.3	
Female	494		58.7	
Ethnicity		841		100
Malay	664		79.0	
Chinese	121		14.4	
Indian	20		2.4	
Others	36		4.3	
CGPA		841		100
2.00–2.50	0		0	
2.51–3.00	426		50.7	
3.01–3.50	415		49.3	
3.51–4.00	0		0	
Father's occupation		841		100
Government servant	364		43.3	
Private servant	205		24.4	
Self-employed	212		25.2	
Others	60		7.1	
Mother's occupation		841		100
Government servant	126		15.0	
Private servant	414		49.2	
Self-employed	167		19.9	
Others	134		15.9	
Family income		841		100
Below RM 2,000.00	0		0	
RM 2,001.00–RM 3,000.00	370		44.0	
RM 3,001.00–RM 4,000.00	300		35.7	
Above RM 4,000.00	171		20.3	
Location		841		100
Rural	463		55.1	
Urban	378		44.9	
Program		841		100
Bakery and pastry	463		55.1	
Catering	378		44.9	
Internship upon graduation		841		100
Yes	841		100.0	
No	0		0	
Internship with industry		841		100
Yes	841		100.0	
No	0		0	

Table IV.
Respondent's
demographic profile

Competence and importance results for bakery students

A paired sample *t*-test was performed to compare whether there are differences between the perceived competence and importance of bakery students (Table V).

Teamwork skills. The findings indicate that there is significant difference between competence and importance of teamwork skills. The mean value for competence of teamwork ($M=42.9815$) is lower than the mean value for importance of teamwork ($M=43.9733$); $t(486)=-8.8186, p=0.000$. This result suggests that the competence gained by bakery students in terms of teamwork skills is lower than the importance perceived by those students.

Information technology. There is significant difference between competence and importance of technology skills. The mean value for competence of technology ($M=43.3922$) is lower than the mean value for importance ($M=43.9446$); $t(486)=-4.451, p=0.000$. This result suggests that the competence of bakery students in terms of technology skills is lower than the importance perceived by those students.

Resource management. There is significant difference between competence and importance of resource management skills. The mean value for competence of resource management ($M=43.9528$) is higher than the mean value for importance ($M=43.5010$); $t(486)=5.49, p=0.000$. This result suggests that the competence of bakery students in terms of resource management skills is higher than the importance perceived by those students.

Ethical. There is significant difference between competence and importance of ethical and professional moral skills. The mean value for competence of ethical and professional moral ($M=42.3039$) is lower than the mean value for importance ($M=43.9446$); $t(486)=-11.142, p=0.000$. This result suggests that the competence of bakery students in terms of ethical and professional moral skills is lower than the importance perceived by those students.

Technical and vocational skills. There is significant difference between competence and importance of technical and vocational skills. The mean value for competence of technical and vocational skills ($M=39.1704$) is lower than the mean value for importance ($M=43.5010$); $t(486)=-31.691, p=0.000$. This result suggests that the competence of bakery students in terms of technical and vocational skills is lower than the importance perceived by those students.

Table V.
Paired sample *t*-test
for the
means of competence
and importance
of employability
skills (bakery)

Variables	Mean competence	Mean importance	<i>t</i>	df	Significance
Communication skills	43.7392	43.5051	1.43	486	0.153
Teamwork	42.9815	43.9733	-8.19	486	0.000*
Problem solving	43.6694	43.5195	1.16	486	0.247
Initiative	43.8994	43.9918	-0.67	486	0.506
Planning and organizing	43.6140	43.6099	0.03	486	0.973
Self-management	43.9487	43.8665	0.57	486	0.568
Learning	43.5606	43.5996	-0.30	486	0.765
Information technology	43.3922	43.9446	-4.45	486	0.000*
Resource management	43.9528	43.5010	5.49	486	0.000*
Entrepreneurship	43.5770	43.5195	0.59	486	0.556
Basic	43.7392	43.9446	-1.75	486	0.081
Leadership	43.5770	43.5010	0.64	486	0.524
Working with others	43.4209	43.5195	-0.74	486	0.462
Ethical	42.3039	43.9446	-11.14	486	0.000*
Tech vocational	39.1704	43.5010	-31.69	486	0.000*
Total	648.5462	655.4415	-7.85	486	0.000*

Note: *Significant at 0.05 level

Summary for baking students. Therefore, the overall gap analysis between competence and importance of employability skill has significant differences. The mean value for competence of employability skills ($M=648.5462$) is lower than the mean value for importance ($M=655.4415$); $t(486)=-7.848$, $p=0.000$. This result suggests that the competence of bakery students in terms of employability skills is lower than the importance perceived by those students.

Competence and importance results for culinary students

In order to validate the results of this gap analysis, a paired sample t -test was performed between the means of importance and competence of employability skills among culinary students. As shown in Table VI, the biggest employability skills gap is in resource management skills and the smallest gap is in technical and vocational skills. Overall, all gaps between importance and competence on skills are statistically significant ($p < 0.05$). This suggests that improvement efforts and corrective actions must be taken, in order to improve the overall satisfaction of these 15 variables. These variables are communication skills, teamwork skills, problem-solving skills, initiative skills, planning skills, self-management skills, learning skills, technology skills, resource management skills, entrepreneurship skills, basic skills, leadership skills, working with others skills, ethic skills, technic and vocational skills.

Teamwork. There is significant difference between competence and importance of teamwork skills. The mean value for importance of teamwork ($M=43.9266$) is higher than the mean value for competence ($M=43.0113$); $t(353)=-5.559$, $p=0.000$. This result suggests that the competence of culinary students in terms of teamwork skills is lower than the importance perceived by those students.

Resource management. There is significant difference between competence and importance of resource management skills. The mean value for importance of resource management ($M=43.4181$) is lower than the mean value for competence ($M=43.8672$); $t(353)=4.655$, $p=0.000$. This result suggests that the competence of culinary students in terms of teamwork skills is higher than the importance perceived by those students.

Entrepreneurship skills. There is significant difference between competence and importance of entrepreneurship skills. The mean value for importance of entrepreneurship

Table VI.
Paired sample t -test
for the
means of competence
and importance
of employability
skills (culinary)

Variables	Mean competence	Mean importance	t	F	Significance
Communication	43.4661	43.6836	-1.137	353	0.256
Teamwork	43.0113	43.9266	-5.559	353	0.000*
Problem solving	43.7062	43.4379	1.799	353	0.073
Initiative	43.8446	43.8870	-0.268	353	0.789
Planning and organizing	43.8588	43.6271	1.668	353	0.096
Self-management	44.0113	43.7684	1.547	353	0.123
Learning	43.5141	43.6215	-0.757	353	0.450
Information technology	43.6497	43.8503	-1.363	353	0.174
Resource management	43.8672	43.4181	4.655	353	0.000*
Entrepreneurship	43.6582	43.4379	2.035	353	0.043*
Basic	43.3333	43.8503	-3.765	353	0.000*
Leadership	44.0819	43.4181	4.414	353	0.000*
Working with others	42.9576	43.4379	-3.284	353	0.001*
Ethical	42.1215	43.8503	-8.265	353	0.000*
Tech vocational	38.8870	43.4181	-23.319	353	0.000*
Total	647.9689	654.6328	-5.956	353	0.000*

Note: *Significant at 0.05 level

($M=43.4379$) is lower than the mean value for competence ($M=43.6582$); $t(353)=2.035$, $p=0.043$. This result suggests that the competence of culinary students in terms of entrepreneurship skills is higher than the importance perceived by those students.

Basic. There is significant difference between competence and importance of basic skills. The mean value for importance of basic skills ($M=43.8503$) is higher than the mean value for competence ($M=43.3333$); $t(353)=-3.765$, $p=0.000$. This result suggests that the competence of culinary students in terms of basic skills is lower than the importance perceived by those students.

Leadership. There is significant difference between competence and importance of leadership skills. The mean value for importance of leadership skills ($M=43.4181$) is higher than the mean value for competence ($M=44.0819$), $t(353)=4.414$, $p=0.000$. This result suggests that the competence of culinary students in terms of leadership skills is lower than the importance perceived by those students.

Working with others. There is significant difference between competence and importance of working with others. The mean value for importance of working with others ($M=43.8503$) is higher than the mean value for competence ($M=42.9576$), $t(353)=-3.284$, $p=0.001$. This result suggests that the competence of culinary students in terms of working with others is lower than the importance perceived by those students.

Ethical. There is significant difference between competence and importance of ethical and professional skills. The mean value for importance of ethical and professional skills ($M=43.8503$) is higher than the mean value for competence ($M=42.1215$), $t(353)=-8.265$, $p=0.000$. This result suggests that the competence of culinary students in terms of ethical and professional skills is lower than the importance perceived by those students.

Tech vocational. There is significant difference between competence and importance of technical and vocational skills. The mean value for importance of technical and vocational skills ($M=43.4181$) is higher than the mean value for competence ($M=38.8870$); $t(353)=-23.319$, $p=0.000$. This result suggests that the competence of culinary students in terms of technical and vocational skills is lower than the importance perceived by those students.

Summary of culinary results. Therefore, the overall gap analyses between competence and importance of employability skills have significant differences. The mean value for importance of employability skills ($M=654.6328$) is higher than the mean value for competence ($M=647.9689$); $t(353)=-5.956$, $p=0.000$. This result suggests that the competence of culinary students in terms of overall employability skills is lower than the importance perceived by those students.

5. Discussion and conclusion

Overall, the findings indicate that the competence gained is lower in terms of teamwork, information technology skills, ethical, technical and vocational skills for bakery students. In terms of culinary, the findings show that teamwork, working with others, ethical, technical and vocational skills gained by students is lower than the importance perceived by them. Thus, students had higher perceptions in terms of skill importance than they did for skill possession (Harris, 2013). This suggests that although students recognize the importance of the given skills, they may not be receiving adequate instruction or course demands to equate to proper possession of the skill in performing the skill.

With the rapid advancement in technology, current human resource requirements seek graduates to have basic management and information skills, communication and technological skills (Singh *et al.*, 2013). The technical industry in Malaysia also emphasizes on these elements, in line with the definition of employability (Robinson, 2000; Singh *et al.*, 2013).

In Husain *et al.*'s (2010) study, they find that all employers, especially from civil engineering, electrical and mechanical fields agree that these competencies (as above) are in line with local and crucial global market needs. Clearly, emphasis on industry-based curriculum competencies is in equipping TVET students with employability skills.

However, the finding of this study indicates that the culinary and bakery students perceive that they are not given adequate exposure to possess such skills. It is important to ensure that graduates are equipped with the twenty-first century skills such as problem solving and analytic, decision making, organization and time management, risk taking and communication (Lynch, 2000; Robinson, 2006; Slusher *et al.*, 2010). Thus, curriculum developers need to incorporate generic and technical skills in designing the curriculum. Further research needs to be conducted taking into consideration view of lecturers and industry partners so that appropriate intervention can be taken to improve the employability skills of vocational graduates majoring in hospitality.

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Corresponding author

Husaina Banu Kenayathulla can be contacted at: husaina@um.edu.my

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