

## Relationship between teaching quality factors and employability among Technology Management students

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### Article Info

#### Article history:

Received Mar 2, 2021

Revised May 29, 2022

Accepted Jun 30, 2022

#### Keywords:

Content quality

Employability

Learner quality

Learning environment quality

Teaching quality

### ABSTRACT

Education system within higher education institution (HEI) is constantly evolved to enhance students' employability in respond to the change of social-economy and technological revolution. Empirical research revealed that teaching quality is extremely important for the development of students' employability attributes. Hence, one of the biggest challenges for HEI is to continuously improve teaching quality with the aim to enhance student employability. This study examined the influence of teaching quality on the employability of Technology Management students. Three important factors for teaching quality are identified from literature review comprising of learner quality, learning environment quality and content quality. This study used quantitative method to collect data via online questionnaire with 60 Technology Management students from a Business School within Malaysia responded. Data collected was analyzed using SPSS in term of normality, reliability, descriptive and Pearson correlation test. Finding from this study reveals that learning environment quality, content quality and learner quality are important, significant and positively correlated with employability. The main implication of this study is students' employability could be assessed based on teaching quality directly instead of via students' academic performance or employability attribute.

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## 1. INTRODUCTION

Students' employability is one of the key measures for higher learning institution's (HLI) performance [1]. Empirical research generally viewed factors that affecting students' employability from two main perspectives, which are students' academic performance and student's employability attributes such as communication skill, problem solving skills and leadership skill [2]. Whereas, the quality of the interaction between teacher and students through-out the teaching and learning process, or namely teaching quality is commonly viewed by prior scholar as the extremely important factor that influent student's academic performance. A quality teaching incorporated an effective inter-relationship among students, teacher, learning content and learning environment [3], hence, on top of enhanced academic performance, a high-quality level of teaching process is also fostering students' employability skills [4]. Thus, empirical study shared consensus that quality teaching and learning process is positively correlated with students' performance, in both academic and non-academic domains. including student's employability [5].

The issue of students' employability is alarming in many countries including Malaysia. According to the Malaysia graduate tracer study report 2019 released by the Malaysia's Ministry of Higher Education (MOHE), approximately 60% of graduates remain unemployed after a year of graduation [6]. The number is yet to reflect the impact of COVID-19 toward the job market. As such, it is imperative for HLI to explore elements or factors that could enhance students' employability. Empirical research on students' employability tends to focus on assessed the impact of students' academic performance and students' skills toward students' employability, as well as the impact of teaching quality on academic performance. Hence the understanding on the direct impact of teaching quality toward students' employability remain ambiguous. As such, this study is conducted to assess the importance level of teaching quality factors perceived by the students in a business school in Malaysia, and to explore the relationship between teaching quality and students' employability. Hence, following are the objectives for this study: i) To identify the importance level of teaching quality factors perceived by students within a Business School in Malaysia; ii) To examine the relationship between teaching quality factors and the employability level perceived by students within a Business School in Malaysia.

## **2. LITERATURE REVIEW**

### **2.1. Students' employability**

Students' employability refers to a set of knowledge, skills and personal attributes that attained by the students and enable them to be more employable [7]. Stiff competitive in the marketplace forced firms continuously to explore opportunities for business improvement. Human resource in term of employees' skill and capability has been recognized as one of the important resources that drive firms toward competitive advantage [8]. However due to rapid change on business environment and technology innovation, the set of employees' skill and knowledge that firms expected is continuously evolving. Hence, it is vital for HLI to ensure the academic programs that offered are still relevant to the industries [9]. In addition, HLI need to consistently review their desired academic programs output, including the type of students' knowledge and skills that match the job market demand, which ultimately enhance students' employability [9]. Empirical research shared consensus that students' academic performance and employability attributes are the two main compositions that formed students' employability [10]. Academic performance reflected the student's achievement across academic subjects relevant to the field of study, it embodies the students had achieved the education goals and attained the fundamental knowledge within the field of study [11]. In contrast, employability attributes reflect students' competency in term of communication skill, interpersonal skill, decision making and problem-solving skills. Empirical research commonly agreed that the quality of teaching and learning process has significant influence on both the students' academic performance and employability attributes [12].

### **2.2. Teaching quality**

Empirical study viewed teaching quality from different perspectives pertaining to students' achievement; for instance, the perspective of teachers' credentials [13], instructional strategy [14], environment setting [15]. Based on holistic view, teaching quality consisting of the entire system of teaching and learning, which could be embodied by the "Input-Process-Output" framework of system theory. Within the setting of this research, "Output" refers to the result of the teaching process, such as the employability skills acquired by the students. While, "Input" denotes to the program objectives, objectified course contents and students or learners. Meantime, "Process" representing the teaching and learning process. This prior research views teaching quality as the values that added into the process of fostering students' knowledge and the application of knowledge to enhance students' employability. While the process of value creation is dependent on three important factors that reflected in Input-Process-Output framework of system theory, which are learner quality, content quality and environment quality as suggested by prior scholars [16], [17].

### **2.3. Learner quality**

Students or learners should take responsibility for their own learning and growth. Quality learners lead to quality teaching. Learner quality is influenced by the learner's personal, social, cognitive, and academic experiences, whereby these experiences formed the learner's characteristic [18]. Basically, quality learners are willing to learn without any rewards. For them, learning is the natural habitual and part of their characteristics [19]. Learner's characteristics can be viewed from two perspective, which are learner's personality trait and information literacy self-efficacy [20]. Learner's personality trait reflects the thoughts, feelings, and behaviors of learner and is positively correlated to student's academic performance and non-academic achievement [21]. On the other hand, information literacy refers to learner's ability to identify, organize and apply information needed throughout the learning process. Finding from prior researches [20], [22] suggested students' information literacy self-efficacy influenced students' problem-solving skill and

communication skill, which are important attribute for students' employability. Hence, it is hypothesized that: Learner quality positively influences students' employability (H1).

#### 2.4. Learning environment quality

Learning environment denoted to the resource, context and cultures of the learning process. The quality of learning environment is influenced by the teaching approach, teaching activity and resources that infused into the teaching process [23]. Empirical study viewed learning environment from two perspective, which are physical learning environment and psychosocial learning environment [24]. Physical learning environment such as class room size and setting, facilities, infrastructures and technology used have effect on students' interest, initiative and motivation to take part in the learning process [25]. In contrast, psychosocial learning environment implies the interaction took place in the learning process and it reflects the interpersonal relationship and interaction between teacher and student, student with student, student with teaching or instructional material [26]. Psychosocial learning environment encourage students to practice social interaction and communication, hence promotes desirable attributes for student employability [27]. As the result, a quality learning environment increases students focus, attention and participation in the learning process, and contributes toward the development of students' employability attributes [26], [27]. Hence, the aforementioned discussions lead to the following hypothesis: Learning environment quality positively influences students' employability (H2).

#### 2.5. Content quality

Teaching content or curriculum content covers the intended body of knowledge and information that delivered or taught by the teacher [28]. Each of the program offered by HLI is accompanied by a set of long-term desired program outcomes or program goals. The quality of teaching content implies to what extend the course content achieves its desired program outcomes or program goals [29]. Hence the design of curriculum content involved mapping of course objectives versus program goals prior to the development of course outline, interactive activities and assessment strategies. Empirical study reveals that there are three common models for content design, which are subject-centered, learner-centered, and problem-centered design [30]. Subject-centered content design focuses on content knowledge with the objective to enhance students' knowledge within the domain of the subject, less emphasis put on student as individual [29]. In contrast, learner-centered content design shifted the focus from teacher to individual students' learning, encourage student participation on the design and selection of educational experiences. Meantime, problem-centered content design is the expansion of learner-centered content design by incorporated a preferable real-world problem for the students to resolve in group. Both learner-centered and problem centered content design inclined to develop students' employability skills such as communication skill, presentation skill, decision making and problem-solving skill [31]. Hence, the following hypothesis is proposed: Content quality positively influences students' employability (H3).

#### 2.6. Research framework

Figure 1 shows the research framework for this study which is developed based on the finding from literature review. The research framework consists of three independent variables (learner quality, learning environment quality and content quality). Additionally, three hypotheses related to the relationship between the three independents variables and dependent variable (employability) are developed as shown in Figure 1.

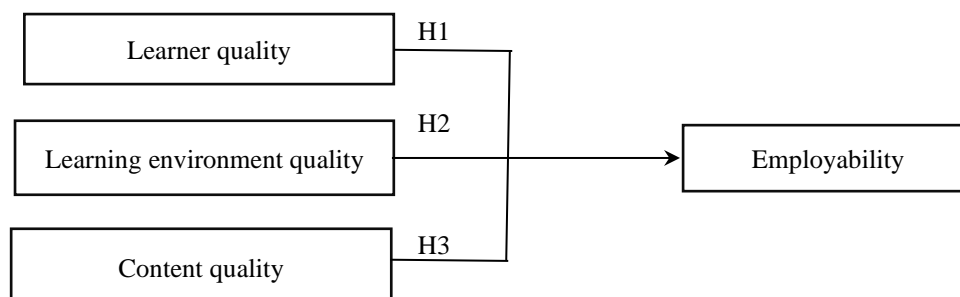


Figure 1. Research framework

### 3. RESEARCH METHOD

This study employed quantitative method in collecting and analysis the data. The relationship between teaching quality and students perceived employability among Technology Management students within a Business School in Malaysia were evaluated using structured questionnaire.

#### 3.1. Population and sampling

The population for this study consisted of Year 1 to Year 4 students enrolled in the Technology Management Program in a Business School within Malaysia. There are 190 students in total and the required sample size was 127 persons. The sampling size was derived based on Krejcie and Morgan [32] sampling table. The study used a cross-sectional quantitative approach to collect data via online questionnaire. Based on the students' information obtained from the Business School, a link to the online questionnaire was sent to the respondents to invite them to take part in the online survey. A reminder email was sent four weeks after the first invitation email was sent.

#### 3.2. Research instrument

The study was quantitative based. The questionnaire consists of 42 questions which are divided into five parts. First part is to collect the respondents' demographic information, while Part B, C and D consist of the questions regarding the importance level of the three teaching quality factors which are learner quality, learning environment quality and content quality. While part E is to assess the respondents' perceived employability. The assessment was done via 5-points scales from "1" representing "Strongly Not Agree" to "5" indicating "Strongly Agree".

#### 3.3. Analysis tool

The study used statistical software namely Statistical Package for the Social Science (SPSS) for the data analysis in term of normality, reliability, descriptive and Pearson correlation test. The normality and reliability of data collected were assessed via Skewness & Kurtosis value and Cronbach Alpha test respectively. Skewness & Kurtosis range of -1.0 and +1.0 shows that data is normally distributed. Besides, Cronbach Alpha reliability value of greater than 0.60 is acceptable for testing the reliability of variables [33]. Next, the perceived importance level of teaching quality factors and the perceived employability levels are derived via descriptive analysis of mean score. The judgement of important level by mean score is based on the criteria shown in Table 1.

Table 1. Interpretation of importance level

Mean Score ( $\mu$ )	Importance level
$1.0 \leq \mu < 1.5$	Not very important
$1.5 \leq \mu < 2.5$	Not important
$2.5 \leq \mu < 3.5$	Neutral
$3.5 \leq \mu < 4.5$	Important
$4.5 \leq \mu \leq 5.0$	Very important

In addition, to test the three hypotheses between teaching quality factors and students' employability Pearson correlation test is used. The hypothesis test is based on significance level (or p-value) of 0.05, hence test result with p-value less than 0.05 indicates a significant relationship. Meantime, the strength of correlation coefficient ( $r$ ) is judged based the coefficient range as shown in Table 2 [34].

Table 2. Strength of correlation coefficient

Correlation coefficient ( $r$ )	Strength
$0 \leq r < 0.195$	Very weak
$0.195 \leq r < 0.395$	Weak
$0.395 \leq r < 0.595$	Moderate
$0.595 \leq r < 0.795$	Strong
$0.795 \leq r \leq 1.00$	Very Strong

### 4. RESULTS AND DISCUSSION

From the sample size of 127, the total number of respondents that have answered the questionnaires is 60. Thus, the respond rate for this study is 47%. All questionnaires are screened and found that there is no issue of missing value based on all the 60 questionnaires received.

#### 4.1. Normality and reliability test

There is no issue in regard with data normality, all measurement items shown that the value of Skewness and Kurtosis are within -1 and +1. Furthermore, Cronbach Alpha reliability value are ranged from 0.856 to 0.945. This demonstrated that the data is statistically significant to proceed for further analysis as described in Table 3.

Table 3. Normality and reliability test result

Teaching quality factors	Normality Test		Reliability Test	
	Skewness	Kurtosis	Cronbach	No. of items
Learner quality	-0.506	-0.1323	0.923	9
Learning environment quality	-0.562	-0.024	0.975	9
Content quality	-0.714	0.797	0.856	9
Employability	-0.211	-0.423	0.882	10

#### 4.2. Importance level of teaching quality factors

To address research objective 1 (To identify the importance level of teaching quality factors), the mean important level score for the three teaching quality factors is ranked accordingly based on the mean score and summarized in Table 4. As refers to Table 4, the mean score of perceived importance level for the three teaching quality factors is ranged from 3.94 to 4.12. Based on the criteria shown in Table 1, finding from the analysis result suggested that all the three teaching quality factors are perceived as important by Technology Management students in the Business School. The finding is consistent with the study done by prior researcher [9] which suggested that the three teaching quality factors are the fundamental needs for competitive advantage of higher education institution.

Table 4. Importance level

Important level of teaching quality factors		
Teaching quality factors	Mean	Level*
Learning environment quality	4.12	Important
Content quality	4.03	Important
Learner quality	3.94	Important

\*Refer to Table 1

In addition, a notable finding from the analysis is external teaching quality factors (i.e., learning environment quality and content quality) are viewed by respondent as relatively more important than internal teaching quality factor (i.e., learner quality). This finding is consistent with research outcome of Ramli [35] who discovered that learners tend to perceive that external teaching and learning factors is more important than internal factor. In addition, the same research also reveals that the external teaching and learning factors affected significantly on internal teaching factors as well as self-directed learning readiness [35]. This finding implies that a quality teaching process should be primarily driven by the higher learning institution by putting emphasis on internal teaching quality factors, such as creating a quality learning environment and developing a quality learning content with the aim to attract and motivate learners or students' participation.

#### 4.3. Relationship between teaching quality factors and employability level perceived by students

To address the second research objective of this study (to assess the relationship between teaching quality and perceived employability among students of Technology Management program in the business school) as well as to test the three research hypotheses, data collected from Part B, C and D of questionnaires is further analysed via Pearson correlation test. The purpose of Pearson correlation test is to examine the relationship between teaching quality and perceived employability among students of Technology Management program in the Business School. The result of analysis is summarized in Table 5.

Table 5. Hypotheses test result

H	Variables	Coefficient of correlation (r)	p-value	Results
H1	Learner quality and employability	0.760 (Strong)*	0.000	Supported
H2	Learning environment quality and employability	0.423 (Moderate)*	0.000	Supported
H3	Content quality and employability	0.658 (Strong)*	0.000	Supported

\*Refer to Table 2

As shown in Table 5, the significant value or p-value for all the three hypotheses test is 0, which is less than the test value of 0.05. Hence, this suggested that all the research hypotheses for this study are supported, which implies that the three teaching quality factors (learner quality, learning environment quality and content quality) are positively influence students' employability. This finding further justified the outcomes of past studies. Prior studies [10], [35] found that learner, learning content and learning environment quality influence students' academic and non-academic performance. In addition, from the perspective of employability, prior scholar [13], [20], [25] also opined that students employability skill is significantly influenced by the quality of learner, learning content and learning environment.

The coefficient of correlation (r) result in Table 5 reveals that the influence of learner and content quality on students' employability is strong. This finding supports the study by Potgieter [36], which places students' personality traits and preferences as important influence factor for their employability attributes and career development. The finding also echoes finding from prior research [25] that viewed quality learning content such as learner-centered and problem centered based content design inclined to develop students' employability skills such as communication skill, presentation skill, decision making and problem-solving skill. In contrast, learning environment quality presents a moderate influence on students' employability. Perhaps this is due to creating a positive learning environment is a challenging process. which involve change on classroom setting, facilities, infrastructures as well as learning cultures. Hence, the effort that required to create the changes, and the time taken for the learner to adopt to the changes is relatively tougher and longer compare with changes on teaching content.

## 5. CONCLUSION

Graduates' unemployment is a complex and comprehensive issue. It is affected by the country economic performance, education policy and system, the professionalism in university and the students as individual. This study explored factors affecting students' employability from the perspective of teaching quality. The study advanced prior research by investigated the direct impact of teaching quality on students' employability, instead of the indirect impact through academic performance or employability attributes as what most of the prior scholar did.

Finding from the study reveals that students viewed learning content quality and environment quality are more important than learner quality. The finding implies that to encourage and motivate students' participation in the teaching and learning process, HLI should focus on the development of a quality learning content and environment. Finding from the hypotheses test consolidated the direct impact of teaching quality toward students' employability. This implies that students' employability could be assessed based on teaching quality directly instead of via academic performance or employability attribute. In term of limitation and future study, the study was carried out via a cross-sectional approach, where data collected was done at a point in time across the whole population. By take into consideration teaching process is a long term and continuously evolve, future research could expand the study via longitudinal study to reflect a long term impact of teaching quality.

## ACKNOWLEDGEMENTS

This work was supported/funded by the Ministry of Higher Education under Fundamental Research Grant Scheme (FRGS/1/2019/SS03/UTM/02/8).




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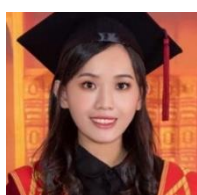
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