CRITICAL SUCCESS FACTORS OF THE CHALLENGES IN PROVIDING QUALITY EDUCATION: A STUDY ON MALAYSIAN PRIVATE HIGHER LEARNING INSTITUTIONS

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ABSTRACT

The issue of quality education in higher learning institutions is timely and crucial due to the Malaysian government's aspiration to turn the country into a centre of educational excellence in the Asian region. Quality education acts as an indicator of the institution's ability to provide tertiary education to the society as well as an instrument for the nation's economic growth. To date, numerous studies have been conducted to measure the quality of education in higher learning institutions in Malaysia. However, the task of identifying the challenges faced by these institutions in providing quality education and the critical success factors to address the challenges has largely been ignored by previous researchers. It is within this overall context that this study employs the Analytic Hierarchy Process, with the aim of identifying and ranking the challenges and also their critical success factors. Data was collected from the stakeholders of Malaysian private HLIs via semi-structured interviews and a questionnaire survey. Results indicate that 'Establishing financial capabilities for the institution's self-sustainability', 'Complying with the rules and regulations of regulatory agencies and relevant professional bodies' and 'Providing facilities to ensure the delivery of quality education' are the challenges that need to be carefully handled by the management of these Malaysian private HLIs. Critical success factors that act as practical solutions to address each challenge were also identified and ranked in this study.

Keywords: quality education, challenges, critical success factors, higher learning institution, Analytic Hierarchy Process

1. Introduction

The Malaysian government's initiative in launching three educational acts in 1996 has resulted in increasing publicity and interest in Malaysia's educational sector development, specifically in its public and private higher learning institutions (HLIs). The National Council on Higher Education Act, the Private Higher Educational Institutions Act, and the National Accreditation Board have also impacted liberalisation and internationalisation of the higher educational sector in Malaysia, enabling the transformation of Malaysia into a centre of educational excellence in the Asian region.

The task of the 20 public universities, 27 polytechnics and 59 community colleges and more than 450 private HLIs comprising universities, university colleges, foreign universities and private colleges (www.moe.gov.my) is not only to accommodate the explosive growth of student enrolments in Malaysia, but also to collaborate with the Ministry of Education (MOE) in realising the government's aspirations (Arokiasamy, 2011). Developing Malaysia into a centre of educational excellence and internationalising Malaysia's higher education are major priorities for the MOE. As contended by Muhamad *et al.* (2006), private HLIs play important roles in fulfilling the government's aspiration in transforming the nation into a centre of educational excellence in the region. The Tenth Malaysia Plan (2011-2015) also emphasises the significance of private HLIs as one of the instruments for driving the nation's economic growth. In particular, the Tenth Malaysia Plan aims to increase the GDP contribution from private HLIs by 2% and attract 150,000 international students by 2015. The vehicle to achieve this objective is through maintaining high standards of quality education, specifically that provided by the private HLIs (Muhamad *et al.,* 2006).

However, negative reports and complaints pertaining to the quality of education in Malaysian private HLIs as emphasised by Muhamad *et al*. (2006), Morshidi (2006), The Star Online (2007), Utusan Malaysia (2008), The New Straits Times (2010), The Star (2011), The New Straits Times (2012), and The Star (2013) cast doubts on the quality measures undertaken by these institutions. The high number of unemployed graduates resulting from their less than desirable skills (Woo, 2006), as well as the low numbers of qualified lecturers with PhD qualifications (Muhamad *et al*., 2006), are some aspects which point to the weaknesses of quality assurance systems in Malaysian private HLIs. Moreover, there are different parties (Fion, 2009) that are interested in how education should be run and a general lack of consensus as to the components that constitute quality education in HLIs (McNaught, 2003).

Fundamentally, the owners and administrators of private HLIs not only face stiff competition within the industry, but are also struggling with limited resources to achieve the quality standards that have been established by the MOE and Malaysian Quality Assurance (MQA) (Yaakob *et al*., 2009). These Malaysian practitioners concur with the views of Belle (2009), Eric (2007) and Donald (2003) that ensuring high quality standards in higher education constitutes one of the major challenges faced in order to remain sustainable in this highly competitive, global era. Yet, despite being

acknowledged as one of the major challenges faced by HLIs, few researchers have attempted to explore the issue in depth. Hence, this study attempts to identify the most critical areas (challenges) faced by Malaysian private HLIs in providing quality education and how such challenges should be solved (critical success factors). By using the Analytic Hierarchy Process (AHP), these challenges and critical success factors are then assessed to determine their ranking and contribution in advancing quality in Malaysian private HLIs.

2. Literature review

2.1 Quality education in higher learning institutions

Defining quality in HLIs has proven to be a challenging task since researchers and practitioners hold differing views on quality (Bornman, 2004). Furthermore, as contended by Harvey and Green (1993), quality education is a term that is highly contested, considerably vague and highly contextual.

Nevertheless, three concepts have been identified in explaining quality education in HLIs. Firstly, it refers to the three elements of the educational system namely quality of input, quality of process and quality of output (Sahney *et al.*, 2008). Input includes factors relating to students, teachers, administrative staff, physical facilities and infrastructure. The processes include teaching, learning and administrative activities while the outputs include examination results, employment, earnings and satisfaction. Secondly, it relates to functions and activities of HLIs such as its curriculum, teaching faculty's qualifications, government, facilities, students' characteristics, management and administration as well as interactive networking (The World Declaration on Higher Education, 1998). The third approach which has gained prominence (Watty, 2005) is the concept of quality education in HLIs that is related to the stakeholders' approach. As affirmed by Vroeijenstijn (1991), it is advisable to define as clearly as possible the criteria that each stakeholder uses when judging quality education so that all these competing views are taken into account when assessing quality.

Recognising the importance of stakeholders in HLIs as asserted by Waaty (2005) and Vroeijenstijn (1991), this study is framed by using the stakeholder's approach to identify the challenges faced by Malaysian private HLIs in providing quality education and subsequently, the CSFs to address each challenge.

2.2 Challenges in higher learning institutions

Belle (2009), Eric (2007) and Donald (2003) agreed that ensuring high quality standards in HLIs constitutes one of the major challenges faced by the HLIs to remain sustainable in this highly competitive, global era. Specifically, the challenges faced by the HLIs identified from early studies include leadership (Laurie, 2004; Sirvanci, 2004; Terry & Stanley, 2002), cultural and organizational transformation (Ahmad *et al*., 2007; Sirvanci, 2004; Srikanthan & Dalrymple, 2003), program and curriculum (Philip & Danial, 2005), customer identification (Sirvanci, 2004), accreditation (Belle, 2009), faculty and other staff (Muhamad *et al*., 2006), financial (Philip, 2007; Sirvanci, 2004) and technological advancement (Sirvanci, 2004).

The studies mentioned above have made conclusions largely based on conceptual standpoints (Timothy, 2008; Philip, 2007; Eric, 2007; Philip & Danial, 2005; Sirvanci,

2004; Laurie, 2004; Donald, 2003). Hence, the present study extends existing works by examining the challenges faced by HLIs, specifically in providing quality education and consequently, providing empirical conclusions by applying the AHP in ranking the challenges.

2.2 Critical success factors and quality practices in HLIs

The principle of CSF was proposed by Ronald Daniel in 1960 and achieved popularity in 1979 through the efforts of John Rockart. According to Rockart (1979), critical success factors (CSFs) have a limited number of areas which, if satisfactory, will ensure competitive performance in organisations. However, in the context of the present study, CSFs are the actionable solutions executed by the management of the institutions to address the challenges in providing quality education. The operationalising concept of CSF was taken from Owlia and Aspinwall (1997) who investigated the CSFs for TQM in HLIs in the United Stated and United Kingdom, as well as Islam (2010) who ranked CSFs for the challenges in achieving Malaysia's vision 2020. These researchers conceptualised CSFs as either the solutions to the problems encountered (Owlia & Apinwall, 1997) or the factors that must be implemented to successfully address the challenges (Islam, 2010).

2.3 Analytical Hierarchy Process in higher learning institutions

In the education industry, AHP methodology has become an increasingly useful tool in different decision making situations (Sipahi & Timor, 2010). Even though previous research has proven the acceptance of AHP as an effective tool in the educational sector, only a few studies touched on the AHP application in education quality management (Henny & Jan, 2006). Some of the recent studies that incorporated the elements of education quality management with AHP application were conducted by Aly *et al*. (2014), Kiarazmi (2013), Ao *et al*. (2012), Pourhasomi *et al*. (2012), Yeşim Yayla and Ortaburun (2011), Anis and Islam (2011), Tsinidou *et al*. (2010), Lam *et al*.(2008) as well as Raharjo *et al*. (2007).

3. Objectives

Overall, the study intends to enhance quality education provided by Malaysian private HLIs through the following specific objectives:

1. To determine various challenges faced by Malaysian private HLIs in providing quality education.
2. To ascertain the critical success factors for each challenge faced by Malaysian private HLIs in delivering quality education.
3. To rank the challenges and critical success factors for each challenge faced by Malaysian private HLIs in the course of providing quality education by using the Analytic Hierarch Process (AHP).

4. Research design/methodology

The present study adopted the mixed methods approach to achieve its research objectives. The first stage involved the qualitative approach to identify the challenges faced by Malaysian private HLIs in providing quality education as well as to ascertain the practical

solutions (CSFs) in addressing the challenges. The second stage of data collection utilised the quantitative approach to rank the identified challenges and critical success factors previously identified.

The stakeholders of Malaysian private HLIs served as the sample for the first stage of data collection for the study. The sample was comprised of 26 respondents, ranging from the authorised personnel in tertiary education regulatory agencies including the Ministry of Education (MOE) and Malaysian Qualification Assurance (MQA), quality directors of the Malaysian private HLIs, employees of the institutions such as the academics and administrative staff, students, prospective employers of the graduates, parents as well as a member of the National Association of Private Educational Institutions (NAPEI) (Tang & Hussin, 2011; Fion, 2009; Fion, 2008, Harvey & Green, 1993). As active participants in HLIs, these stakeholders were selected since they are directly involved in deciding how quality is measured and/or in measuring and controlling quality (Fion, 2009).

In the context of private HLIs in Malaysia, three major groups of stakeholders were identified by Fion (2008). The first group is the government, specifically the MOE. The second group, the intermediaries, represent the authority that deals with the auditing or accrediting practices in the Malaysian education industry, for example, the MQA and professional bodies. The third group of stakeholders range from the institution itself to the students, parents, employees and potential employers of the graduates. The institution involves the senior level management, the academics and administrators that run and operate the private HLIs in Malaysia.

Input from these stakeholders was analysed by applying thematic analysis, a method to analyse qualitative data, as suggested by Cresswell, (2009). Thematic analysis was applied to analyse the data for the challenges and CSFs in order to specifically address each challenge.

The list of identified challenges and CSFs was modified thrice before the final list was obtained. The list was then validated via a content-construct method (Kiarazm & Koohkan, 2013) by three professors who have substantial experience in private and public HLIs in Malaysia. Again, the list was amended according to these experts' hindsight as the top management in the Malaysian private HLIs. The complete list of challenges and CSFs for each challenge is shown in Table 5. The AHP questionnaire design for the present study was then constructed by referring to the AHP questionnaires of Hayrapetyan and Kuruvilla (2012); Kim *et al.* (2005); Grandzol (2005) and Strasser (2002). Refer to Appendix 1 for sample of the AHP questionnaire.

Thirty-five respondents representing stakeholders of Malaysian private HLIs were carefully selected for the second stage of data collection to enable the ranking of the challenges and the corresponding CSFs for each challenge (refer to Table 1). The details of the 35 selected respondents are as follows:

- For the Malaysian private HLIs, respondents were selected from three categories. These range from the top management constituting the quality director of the institution, administrators from the managerial level and various academics including professors, PhD holders and senior lecturers. The majority have more than 7 years of working experience in their current institutions. The participants from this category

and the institutions they represent (Arokiasamy *et al.*, 2009; Mohamad *et al*., 2006) are listed in Table 2.

- For the tertiary education regulatory agencies, AHP responses were taken only from the authorised personnel who have substantial experience in handling quality issues of Malaysian private HLIs.
- Student views were obtained from those pursuing PhD, Masters and Bachelors programmes at several Malaysian private HLIs. Most were in the midst or end stage of their studies.
- The AHP responses were also obtained from the parents of children in Malaysian private HLIs. Their feedback is vital as they expect their children to be employed by public or private organisations as they have invested large amounts of money for their children's education.
- Prospective employers representing the external customers of the education industry are also included in the present study. Responses were acquired from the owner, general manager and human resource manager of the companies who have direct involvement in recruiting personnel in their organisations, particularly from the Malaysian private HLIs.

Demographic profiles of these 35 respondents are illustrated in Table 3.

The AHP questionnaires in the present study were collected from the respondents via the drop and collect survey method (Brown, 1987). In this case, appointments were made to ensure that the questionnaires were personally handed to the respondents. A short briefing was then conducted to explain how the AHP questionnaire should be answered. The respondents were given 3 days to complete the questionnaire as the questionnaire consisted of 156 pairwise comparison statements.

Table 1
Types of stakeholders

Types of Stakeholders	**Frequency**	**Percentage**
• Malaysian private HLIs	15	42.9
• Regulatory agencies	10	28.6
• Students	5	14.3
• Parents	3	8.6
• Prospective employer	2	5.7
Total	**35**	**100**

Table 2
Number of respondents (from the HLIs) and the institution's ownership

Types of institution	**Number of Respondents**	**Percentage**
• Supported by Government Linked Companies	4	26.7
• Supported by State Government/other Influential Group	5	33.3
• Owned by 'Entrepreneurs'	2	13.3
• Owned by Large Companies	4	26.7
Total	**15**	**100**

Table 3
Stakeholder's demographics profiles

Demographic Profile	Frequency	Percentage
Gender		
• Male	24	68.4
• Female	11	31.4
Race		
• Malay	25	71.4
• Chinese	5	14.3
• Indian	2	5.7
• Others	3	8.6
Age Group		
• 21 – 30 years	4	11.4
• 31 – 40 years	12	34.3
• 41 – 50 years	9	25.7
• 51 year and above	10	28.6
Educational level		
• Certificate	1	2.9
• Diploma	1	2.9
• Professional	1	2.9
• Bachelors	9	25.7
• Masters	18	51.4
• PhD	4	11.4
• Others	1	2.9

5. Data analysis

For the present study, 35 respondents representing stakeholders of Malaysian private HLIs were chosen. All questionnaires were completed and answered as required, making them usable for analysis. A sample of the completed questionnaire in a pairwise comparison matrix (PCM) format is provided in Exhibit 1.

Each respondent had different views in response to the significance of the challenges and the relevant CSF for each challenge. Exhibit 2 exemplifies the interval PCMs where the interval of a specific comparison is determined by taking the minimum and the maximum for all responses pertaining to a specific judgement, an example of the interval being (1/9, 9). The wider the length of the interval, the more the respondents differed on the corresponding judgements. It is noted that the differences came from only two individuals, where the majority of the respondents revolved around some particular value within the interval (Islam, 2010). In addition, as emphasised by Dong *et al*. (2010), views from different groups of decision makers may differ substantially from each other.

Therefore, to aggregate different judgements from these 35 respondents, geometric means method was utilised (Basak & Saaty, 1993). The geometric means of group judgements is the mathematical equivalent of consensus if all the members are considered equal (Islam, 2010). For that purpose, Expert Choice was used to calculate the priorities of the challenges and CSFs for each challenge from the PCMs using the geometric means. The PCMs that are obtained using the geometric means with an acceptable value of consistency ratio (CR<0.1) are illustrated in Exhibit 3. It is noted that though the consistency ratios for a number of individual pairwise comparison matrices are more than

0.10, the ratios for all the combined pairwise comparison matrices (after taking the geometric means) are less than 0.10.

Exhibit 1
A sample of completed AHP questionnaire in PCMs

Challenges to provide quality education by Malaysian private HLIs

	C1	C2	C3	C4	C5	C6	C7	C8
C1		1/7	1/7	5	1	5	6	1/9
C2			7	7	6	1	7	1
C3				7	6	1	7	1/9
C4					7	1	5	1/6
C5						1/7	8	1
C6							8	1
C7								1/8
C8								

CR = 0.42

CSFs for Competition

	C11	C12	C13	C14	C15	C16
C11		9	8	1	7	7
C12			1	1	1	5
C13				1/5	1/5	1/3
C14					1	7
C15						1
C16						

CR = 0.17

CSFs for Lecturers

	C21	C22	C23	C24	C25	C26	C27
C21		1	1	2	1/6	1/7	1
C22			1	6	1	1	5
C23				5	1	1	5
C24					1/5	1/7	1/2
C25						1	4
C26							6

CR = 0.07

CSFs for programme

	C31	C32	C33	C34	C35	C36	C37
C31		1/7	1	¼	1/6	1	1/2
C32			7	1	1	7	1
C33				1/6	1/7	1/2	1
C34					1	7	7
C35						7	7
C36							1
C37							

CR = 0.07

CSFs for students

	C41	C42	C43	C44	C45	C46
C41		1/7	6	7	1	5
C42			7	7	1	6
C43				1/6	1/7	1
C44					1/6	1
C45						7
C46						

CR = 0.14

CSFs for financial

	C51	C52	C53	C54	C55	C56	C57	C58
C51		1/8	1/8	1	1/3	1/5	1/5	1/6
C52			1/8	8	8	7	1	7
C53				9	9	9	9	9
C54					1	1	1	7
C55						1	1	6
C56							1	2
C57								1

CR = 0.19

CSFs for facilities

	C61	C62	C63
C61		1	1
C62			1
C63			

CR = 0.00

CSFs for research

	C71	C72	C73	C74	C75	C76
C71		1	1	1/8	1/4	1
C72			1	1/8	1/8	1
C73				1/8	1/6	1
C74					8	8
C75						1
C76						

CR = 0.10

CSFs for accreditation

	C81	C82	C83	C84	C85
C81		8	8	1	1
C82			1	1/6	1
C83				1/7	1
C84					6
C85					

CR = 0.12

Exhibit 2
Interval PCMs

Challenges to provide quality education by Malaysian private HLIs

	C1	C2	C3	C4	C5	C6	C7	C8
C1		1/9,9	1/9,1	1/9,5	1/9,1	1/8,5	1/7,7	1/9,8
C2			1/7,8	1/3,8	1/9,8	1/8,8	1/2,8	1/9,8
C3				1/8,8	1/9,8	1/8,8	1/5,8	1/9,7
C4					1/9,7	1/7,8	1/7,8	1/9,6
C5						1/7,9	5,9	1/9,7
C6							1/7,8	1/9,3
C7								1/9,7
C8								

CSFs for Competition

	C11	C12	C13	C14	C15	C16
C1		1/7,9	1/8,8	1/8,8	1/9,8	1/7,8
C11			1,9	1/8,8	1/9,8	1/8,8
C12				1/8,8	1/9,8	1/7,8
C13					1/9,8	7,9
C14						1/7,7
C15						
C16						

CSFs for Lecturers

	C21	C22	C23	C24	C25	C26	C27
C2		1/9,8	1/9,8	1/9,8	1/7,8	1/8,8	1/8,8
C21			1,9	3,9	1,9	1/8,9	1/8,9
C22				1/7,8	1/7,8	1/8,9	1/8,8
C23					1/7,9	1/9,7	1/9,1
C24						1/8,7	1/8,7
C25							1,8
C26							

CSFs for programme

	C31	C32	C33	C34	C35	C36	C37
C3		1/9,9	1/9,8	1/9,8	1/9,8	1/8,8	1/8,8
C31			1/9,9	1/8,8	1/8,8	1/7,9	1/8,8
C32				1/8,9	1/9,7	1/9,7	1/9,7
C33					1/9,8	1/8,7	1/8,7
C34						1/7,8	1/8,7
C35							1/8.8
C36							
C37							

CSFs for students

	C41	C42	C43	C44	C45	C46
C4		1/8,8	1/7,8	1/8,8	1/8,9	1/8,8
C41			5,9	1/8,9	1/9,8	1/8,8
C42				1/3,1/8	1/9,1	1/8,8
C43					1/9,8	1/8,8
C44						1,8
C45						
C46						

CSFs for financial

	C51	C52	C53	C54	C55	C56	C57	C58
C5		1/9,8	1/9,1	1/9,9	1/9,9	1/9,5	1/9,8	1/9,9
C51			1/9,1	1/8,9	1/9,9	1/9,7	1/9,5	1/8,9
C52				1/8,9	1/9,9	1/9,9	1/9,9	1,9
C53					1/9,8	1/9,8	1/9,8	1/7,9
C54						1/8,1	1/9,8	1/8,8
C55							1/8,8	1/8,8
C56								1/8,8
C57								

CSFs for facilities

	C61	C62	C63
C6		1/8,9	1/9,8
C61			1/9,7
C62			
C63			

CSFs for research

	C71	C72	C73	C74	C75	C76
C7		1/8,9	1/8,9	1/9,1	1/8,8	1/9,9
C71			1/8,9	1/8,1/3	1/8,8	1/9,8
C72				1/8,1	1/9,7	1/8,6
C73					1/8,8	1/8,9
C74						1/8,7
C75						
C76						

CSFs for accreditation

	C81	C82	C83	C84	C85
C8		1/9,9	1/8,9	9,1/7	1/8,9
C81			1/8,9	1/7,9	1/8,9
C82				1/8,8	1/8,7
C83					1/7,8
C84					
C85					

Exhibit 3
PCMs comprising the geometric means of individual judgements

Challenges to provide quality education by Malaysian private HLIs

	C1	C2	C3	C4	C5	C6	C7	C8
C1		0.311	0.412	0.529	0.404	0.285	0.626	0.321
C2			1.018	1.657	0.497	1.155	1.199	0.527
C3				1.617	0.667	0.864	1.235	0.564
C4					0.817	0.604	1.551	0.850
C5						2.127	2.087	0.886
C6							1.288	0.622
C7								0.4165
C8								

CR = 0.02

CSFs for Competition

C1	C11	C12	C13	C14	C15	C16
C11		0.879	1.065	0.768	0.636	1.154
C12			1.699	1.264	1.161	1.486
C13				1.493	1.222	1.527
C14					1.354	1.708
C15						0.990
C16						

CR = 0.02

CSFs for Lecturers

C2	C21	C22	C23	C24	C25	C26	C27
C21		0.592	0.406	1.196	1.326	0.796	0.565
C22			1.300	1.661	2.263	1.029	1.736
C23				2.423	1.957	0.369	1.139
C24					1.412	0.369	0.725
C25						0.337	0.458
C26							0.934

CR = 0.01

CSFs for programme

C3	C31	C32	C33	C34	C35	C36	C37
C31		0.972	1.570	0.731	0.635	0.988	1.024
C32			1.732	0.900	0.873	1.317	0.882
C33				0.404	0.439	1.116	0.861
C34					0.669	1.601	1.013
C35						2.281	1.274
C36							0.274
C37							

CR = 0.02

CSFs for students

C4	C41	C42	C43	C44	C45	C46
C41		0.761	1.704	0.894	0.281	0.760
C42			3.983	1.708	0.675	1.623
C43				0.617	0.278	0.658
C44					0.394	1.101
C45						2.866
C46						

CR = 0.01

CSFs for financial

C5	C51	C52	C53	C54	C55	C56	C57	C58
C51		0.561	0.716	1.179	0.569	0.568	0.605	0.438
C52			1.018	1.389	0.873	0.797	0.984	0.650
C53				1.622	1.602	1.278	2.008	0.744
C54					1.080	0.587	0.657	0.357
C55						0.967	1.612	0.637
C56							1.336	0.509
C57								0.452

CR = 0.01

CSFs for facilities

C6	C61	C62	C63
C61		1.891	1.175
C62			0.614
C63			

CR = 0.00

CSFs for research

C7	C71	C72	C73	C74	C75	C76
C71		1.129	0.399	0.528	0.528	0.461
C72			0.584	0.333	0.685	0.443
C73				0.465	0.975	0.805
C74					1.550	0.984
C75						0.557
C76						

CR = 0.01

CSFs for accreditation

C8	C81	C82	C83	C84	C85
C81		0.573	1.396	0.569	0.657
C82			1.453	1.043	1.249
C83				0.614	0.972
C84					1.006
C85					

CR = 0.01

6. Findings

6.1 Challenges in providing quality education by Malaysian private HLIs

The challenges in providing quality education by Malaysian private HLIs that were identified in the first stage of data collection for the present study, their priorities and corresponding ranks are provided in Table 4. The Expert Choice screen of priorities for the challenges is also illustrated in Figure 1 below.

Table 4
Challenges, their priorities and ranks

Challenges	Priorities	Rank
Gaining competitive advantage in a highly competitive environment *(C1)*	0.052	7
Employing and retaining dedicated academics with PhD qualifications, industrial experience and strong research backgrounds *(C2)*	0.128	4
Offering programmes that are continuously relevant to the needs of industry and the nation *(C3)*	0.128	4
Moulding and transforming students from poor academic backgrounds and with low soft skills *(C4)*	0.108	5
Establishing financial capabilities for the institution's self-sustainability *(C5)*	0.185	1
Providing facilities to ensure the delivery of quality education *(C6)*	0.130	3
Cultivating a research culture among academics *(C7)*	0.087	6
Complying with the rules and regulations of regulatory agencies and relevant professional bodies *(C8)*	0.182	2

Figure 1. Expert choice screen of priorities for challenges

Data in Table 4 and Figure 1 indicate that Malaysian private HLIs should focus on the challenges that are ranked top most to ensure that quality education is provided to their stakeholders. The first top three challenges are 'Establishing financial capabilities for the institution's self-sustainability, 'Complying with the rules and regulations of regulatory agencies and relevant professional bodies' and 'Providing facilities to ensure the delivery of quality education'. The priority values of the challenges are 0.185, 0.182 and 0.130 respectively. The challenges for 'Employing and retaining dedicated academics with PhD qualifications, industrial experience and strong research backgrounds' and ''Offering programmes that are continuously relevant to the needs of industry and the nation' are both placed at the fourth rank with priority value of 0.128.

The least three importance challenges are 'Molding and transforming students from poor academic backgrounds and with low soft skills', 'Cultivating a research culture among

academics' and 'Gaining competitive advantage in a highly competitive environment' with priority values of 0.108, 0.087 and 0.052 respectively.

6.2 Critical success factors for each challenge

Besides the above findings, CSFs for each challenge previously identified in the first stage of data collection were also ranked. Details of the CSFs for each challenge, their priorities and ranks are shown in Table 5. Explanations on the challenges and their CSFs according to the ranking are elaborated on in the following paragraphs.

Data in Table 4 confirms that 'Establishing financial capabilities for the institution's self-sustainability' is the challenge ranked first. Therefore, efforts should be focused by the management of Malaysian private HLIs on 'High competency in managing the institution's finance', 'Obtain the right number of students' and 'Collaborate with the industries by commercialising and innovating their products as well as improving their processes'. This is because these are the CSFs ranked first, second and third with priority values of 0.208, 0.153 and 0.130.

'Complying with the rules and regulations of regulatory agencies and relevant professional bodies' is the challenge ranked second. Out of eight CSFs, it is noted that 'Top management commitment and support', 'All necessary actions should be taken with regards to the full audit report provided by the MQA' and 'Establish precise structure of processes and standard operational procedures for the institution' are the strategies that should be considered by the Malaysian private HLIs to address the issue of compliance. The priority values of these CSFs are 0.247, 0.239 and 0.206 respectively

The third ranked challenge is 'Providing facilities to ensure the delivery of quality education'. The findings of this study reveal that 'Allocate certain percentage of the institution's annual budget to build and improve facilities' (0.420), 'Comply with the facilities requirements as prescribed by the regulatory agencies (MOE and MQA) and relevant professional bodies' (0.359) and 'Establish an efficient facility/maintenance department' (0.221) are the CSFs that can be applied by the Malaysian private HLIs to address the issue on facilities.

'Employing and retaining dedicated academics with PhD qualifications, industrial experience and strong research backgrounds' is ranked fourth with the priority value 0.128. Three CSFs to address the challenge are identified with priority values of 0.208, 0.199 and 0.179 respectively. The first, second and third ranked CSFs are 'Establish clear career pathways so that academics can plan the direction of their careers', 'Offer attractive salary packages' as well as 'Provide attractive benefits'.

'Offering programmes that are continuously relevant to the needs of industry and the nation' is another challenge ranked fourth with the priority value of 0.128. To address this issue, several CSFs can be utilised by the Malaysian private HLIs namely; 'Comply with the requirements of MQA and relevant professional bodies', 'Grow experts to develop the institutions' curricula' and 'Continually review the curriculum due to the constant feedback from industry advisors, external examiners, professional bodies and MQA'. The priority values are 0.204, 0.171 and 0.166 respectively.

Six CSFs identified the challenge of 'Moulding and transforming students from poor academic backgrounds and with low soft skills'. This challenge is ranked fifth with the priority value of 0.108. Focus should be given to the CSFs of 'Have dedicated lecturers to deliver knowledge within the students' area of studies' (0.336), 'Enforce the teaching and practice of soft skills' (0.218) and 'Provide relevant services (i.e., remedial classes and advisory system) to improve the performance of academically poor students' (0.128) as they are ranked first, second and third.

'Cultivating a research culture among academics' is the challenge that is ranked sixth with the priority value of 0.087. To address the challenge, six CSFs are identified. However, 'Provide internal grants and facilitate applications for external grants' (0.255), 'Provide research facilities for academics to involve actively in research such as financial support, equipment and reduction of teaching workload' (0.230) and 'Establish a Research Management Centre in order to plan, manage and increase research activities and publications' (0.170) are the CSFs that are placed top most to address the issue of research activities among academics for Malaysian private HLIs.

The final challenge 'Gaining competitive advantage in a highly competitive environment' (0.127) was ranked seventh in importance. Ranking of the CSFs by the respondents to address the issue of competition among Malaysian private HLIs are identified. The first, second and third CSFs are 'Offer programmes that are in high demand in the industry/market' (0.209), and 'Establish comprehensive excellence in every strata of governing the institution' (0.179) and 'Offer competitive and affordable tuition fees' (0.178).

Table 5
Critical success factors for each challenge, their priorities and ranks

Challenges	**Critical success factors**	**Priorities**	**Rank**
Gaining competitive advantage in a highly competitive environment *(C1)*	Develop and utilise relevant marketing strategies which help to differentiate the institutions from their competitors *(C11)*	0.149	5
	Offer programmes are in high demand in the industry/market *(C12)*	0.209	1
	Establish comprehensive excellence in every strata of governing the institution *(C13)*	0.179	2
	Offer competitive and affordable tuition fees *(C14)*	0.178	3
	Engage efforts to attain full-fledged university status *(C15)*	0.159	4
	Venture into programmes that are few or yet to be offered by the other private HLIs, provided there is a good demand for the programme *(C16)*	0.127	6
Employing and retaining dedicated academics with PhD qualification, industrial experience and strong research background *(C2)*	Provide continuous training to enhance academics' teaching skills, knowledge and motivation *(C21)*	0.092	6
	Offer attractive salary packages *(C22)*	0.199	2
	Provide attractive benefits *(C23)*	0.179	3
	Establish the young lecturers' scheme *(C24)*	0.093	5
	Bring in foreign lecturers, particularly for critical programmes *(C25)*	0.075	7
	Establish clear career pathways so that academics can plan the direction of their career *(C26)*	0.208	1
	Establish avenues for academics to be prolific in research *(C27)*	0.155	4
Offering programmes that are continuously relevant to the needs of industry and the nation *(C3)*	Establish strong linkages between the university and industries *(C31)*	0.130	5
	Embed soft skill components in the programmes and modules to enhance student development and employability *(C32)*	0.145	4
	Adapt best practices from collaborations with local and foreign universities *(C33)*	0.093	6
	Continually review the curriculum due to the constant feedback from industry advisors, external examiners, professional bodies and MQA *(C34)*	0.166	3
	Comply with the requirements of MQA and relevant professional bodies *(C35)*	0.204	1
	Invite industry experts to give seminars and conduct co-teaching to expose students to real business scenarios *(C36)*	0.091	7
	Grow experts to develop the institutions' curricula *(C37)*	0.171	2
Moulding and transforming students from poor academic backgrounds and with low soft skills *(C4)*	Offer bridging programme to enhance language skills and re-engineer thinking skills *(C41)*	0.118	5
	Enforce the teaching and practice of soft skills *(C42)*	0.218	2
	Hold continuous meetings and dialogues with the student representative councils *(C43)*	0.075	6
	Provide relevant services (i.e., remedial classes and advisory system) to improve the performance of academically poor students *(C44)*	0.128	3
	Have dedicated lecturers to deliver knowledge within the students' area of studies *(C45)*	0.336	1
	Implement counselling systems to improve poor mind-sets and attitudes the students *(C46)*	0.126	4
Establishing financial capabilities for the institution's self-sustainability *(C5)*	Practice prudence and transparency in budgeting and spending *(C51)*	0.084	7
	Fully utilise the institution's physical assets and multi-tasking of man power *(C52)*	0.112	5

	Obtain the right number of students *(C53)*	0.153	2
	Establish consultancy and training centres to generate income *(C54)*	0.084	8
	Obtain continuous support from the state government or parent company *(C55)*	0.127	4
	Collaborate with industries by commercialising and innovating their products as well as improving their processes *(C56)*	0.130	3
	Establish a good relationship with the government to gain possible government benefits *(C57)*	0.102	6
	High competency in managing the institution's finance *(C58)*	0.208	1
Providing facilities to ensure a delivery of quality education *(C6)*	Allocate certain percentage of the institution's annual budget to build and improve facilities *(C61)*	0.420	1
	Establish an efficient facility/maintenance department *(C62)*	0.221	3
	Comply with the facilities' requirements as prescribed by the regulatory agencies (MOE and MQA) and relevant professional bodies *(C63)*	0.359	2
Cultivating a research culture among academics *(C7)*	Develop post graduate programmes for the institution *(C71)*	0.099	5
	Establish a Consultancy Centre and collaborate actively with public and private sectors *(C72)*	0.094	6
	Establish a Research Management Centre in order to plan, manage and increase research activities and publications *(C73)*	0.170	3
	Provide internal grants and facilitate applications for external grants *(C74)*	0.255	1
	Impose publication as one of the essential elements for promotion of academics *(C75)*	0.152	4
	Provide research facilities for academics to involve actively in research such as financial support, equipment and reduction of teaching workload *(C76)*	0. 230	2
Complying with the rules and regulations of regulatory agencies and relevant professional bodies *(C8)*	Establish a Quality Assurance Unit with strong professional links with the MQA and professional bodies *(C81)*	0.154	5
	Top management commitment and support *(C82)*	0.247	1
	Provide continuous internal and external training to ensure that the requirements of the MQA and professional bodies are compiled and can be executed by all levels of management *(C83)*	0.155	4
	All necessary actions should be taken with regards to the full audit report provided by the MQA *(C84)*	0.239	2
	Establish precise structure of processes and standard operational procedures for the institution *(C85)*	0.206	3

7. Conclusions

This study provides some valuable insights into the challenges faced by the Malaysian private HLIs, particularly in providing quality education and the corresponding CSFs that act as practical solutions to address the challenges. Furthermore, the present study also provides some empirical conclusions by applying the AHP in ranking the challenges and CSFs.

By obtaining the responses from 35 participants who represent the stakeholders of Malaysian private HLIs; the ranking of the challenges and CSFs for each challenge was established. Geometric means method was used to aggregate different judgements from these 35 respondents. The geometric means, priorities and ranks were calculated with the

help of the software programme, Expert Choice. From the analysis, two important conclusions can be drawn:

1) From the eight challenges identified in the first stage of data collection, it is proven that 'Establishing financial capabilities for the institution's self-sustainability' is the challenge that requires urgent attention by the management of Malaysian private HLIs. The finding is in agreement with Philip (2007) who stated that HLIs need adequate funding if they are to provide quality education for the public. Furthermore, sufficient funds are needed to achieve the efficiency and effectiveness aspired to by the top management of HLIs, particularly the Malaysian private HLIs (Sirvanci, 2004). The other two important challenges that should be carefully managed by the Malaysian private HLIs are 'Complying with the rules and regulations of regulatory agencies and relevant professional bodies' as well as 'Providing facilities to ensure the delivery of quality education'.

2) The CSFs that have been determined at the first stage of data collection are also ranked. These CSFs act as practical solutions to address each challenge. The respondents observed that 'High competency in managing the institution's finance', 'Obtain the right number of students' and 'Collaborate with the industries by commercialising and innovating their products as well as improving their processes' are the three significant CSFs that should be considered by the management of Malaysian private HLIs to address the first ranked challenge of financial capability.

   To address the second ranked challenge of compliance, the survey reports that 'Top management commitment and support', 'All necessary actions should be taken with regards to the full audit report provided by the MQA' and 'Establish a precise structure of processes and standard operational procedures for all the activities of the institution' are the three relevant CSFs that the Malaysian private HLIs should focus on to address the issue of complying with rules and regulation of regulatory agencies and relevant professional bodies.

   For the challenge of facilities, the study advises the management of Malaysian private HLIs to 'Allocate certain percentage of the institution's annual budget to build and improve facilities', 'Comply with the facilities' requirements as prescribed by the regulatory agencies (MOE and MQA) and relevant professional bodies' and 'Establish an efficient facility/maintenance department' as the functional solutions to address the issue.

The findings of this study support the application of the AHP as a viable technique in higher education decision making. However, with a small sample size, caution must be taken, as it limits generalizability of the result. In future studies, it might be possible to proceed with a larger sample size particularly for each type of stakeholder. It is also suggested to examine whether the ranking for the challenges and their corresponding CSFs differs according to the different groups of stakeholders for Malaysian private HLIs. The relationship between the challenges and the CSFs can also be determined by applying the ANP as a tool in future investigations.

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APPENDIX

Appendix 1: Sample for the AHP Questionnaire

For each statement below, please COMPARE the relative IMPORTANCE with respect to: GOAL which is to provide quality education by Malaysian private Higher Learning Institutions. CHOOSE and CIRCLE ONLY ONE NUMBER per row by using the following scale:
1= EQUAL 3=MODERATE 5=STRONG 7=VERY STRONG 9=EXTREME

Challenges In Providing Quality Education By Malaysian Private HLIs

1.	COMPETITION	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	LECTURERS
2.	COMPETITION	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	PROGRAMME
3.	COMPETITION	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	STUDENTS
4.	COMPETITION	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	FINANCIAL
5.	COMPETITION	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	FACILITIES
6.	COMPETITION	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	RESEARCH
7.	COMPETITION	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	ACCREDITATION
8.	LECTURERS	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	PROGRAMME
9.	LECTURERS	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	STUDENTS
10.	LECTURERS	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	FINANCIAL
11.	LECTURERS	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	FACILITIES
12.	LECTURERS	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	RESEARCH
13.	LECTURERS	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	ACCREDITATION
14.	PROGRAMME	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	STUDENTS
15.	PROGRAMME	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	FINANCIAL
16.	PROGRAMME	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	FACILITIES
17.	PROGRAMME	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	RESEARCH
18.	PROGRAMME	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	ACCREDITATION
19.	STUDENTS	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	FINANCIAL
20.	STUDENTS	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	FACILITIES
21.	STUDENTS	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	RESEARCH
22.	STUDENTS	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	ACCREDITATION
23.	FINANCIAL	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	FACILITIES
24.	FINANCIAL	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	RESEARCH
25.	FINANCIAL	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	ACCREDITATION
26.	FACILITIES	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	RESEARCH
27.	FACILITIES	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	ACCREDITATION
28.	RESEARCH	9	8	7	6	5	4	3	2	**1**	2	3	4	5	6	7	8	9	ACCREDITATION

SUMMARY	DETAIL
COMPETITION	Gaining competitive advantage in a highly competitive environment
LECTURERS	Employing and retaining dedicated academics with PhD qualification, industrial experience and strong research background
PROGRAMMES	Offering programmes that are continuously relevant to the needs of industry and the nation
STUDENTS	Moulding and transforming students from poor academic background and low soft skills
FINANCIAL	Establishing financial capabilities for the institution's self-sustainability
FACILITIES	Providing facilities to ensure a delivery of quality education
RESEARCH	Cultivating a research culture among academics
ACCREDITATION	Complying with the rules and regulations of regulatory agencies and relevant professional bodies