

Knowledge management portal: connecting higher learning institution and employer

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Abstract- In today's globalization, educational systems are challenged by different pressures. The skills held by the ICT graduates from Higher Learning Institutions (HLI) directly impact the employment level in the job market. Mismatch of employee's qualifications with employers' needs is a major issue in the current job market. There is an urgent need for a study that investigates the causes of the gap between the employer and students' knowledge and skills sets required for a new entry-level in the job market. There are limited discussions on the influence of Knowledge Management (KM) in Malaysian Higher Learning Institutions. This article outlines some of the major underlying causes of unemployment among Malaysian ICT undergraduates and explores the potential and challenges of KM in HLI to reengineer the teaching and learning process to meet the industry needs. This paper have used questionnaire to gather information from 240 current undergraduate students, 354 graduated students and 152 employers from both Local and International companies in Malaysia. Besides distributing questionnaires, interviewing was carried out on the employers. This paper concludes that with the help of KM Portal, HLI could improve their teaching and learning process by improving their curriculum which could produce quality students that satisfy the employers' needs.

Keywords: Curriculum Development, Teaching and Learning, Employment, Higher Learning Institution, Knowledge Management, Employer, ICT, Portal

1. INTRODUCTION

In 21st Century, there has been a growing concern about the role of HLI and how they are meeting the employers' needs. Increasingly, HLI are being asked by industry, government and other stakeholders to produce graduates with versatile workplace skills, as well as subject-specific skills. With globalization and rapid technological advances, the job market has become more mobile and competitive than ever. Effective use of Real-World Tools is an important skill as the 21st century students are expected to produce high quality results with real-world application [1]. As a discipline, ICT is always changing, with rapid advances in technology, shifting job descriptions,

and an increasing number of diverse factors which affect job success in the field. The evolution of ICT in 21st century is the major cause of the dilemma meeting HLI and employers as they try to produce students or to recruit workers for the changing IT environment [2]. As technologies keep changing constantly, HLI prefer to keep their curriculum updated and current. But doing so requires knowing what skill sets are in demand in the current market [3]. The ICT graduates should possess the required skills and training by their HLI to perform well at the entry-level position and to have a basis for continued career growth as a professional [4]. However, there is an existence of gaps between

knowledge and skills that are taught in HLI and those that are demanded by the ICT industry. This is supported by Braun, Crable and Tesch (2004) that there is constrain in updating the academic curriculum as there is a lack of resources available to HLI [5]. So, the potential perception gaps between recruiters and students about skills required need to be investigated. The recognition of the gaps motivates HLI and students to adjust their skills and curricula design which suits the current market needs.

2. STATISTICS OF UNDERGRADUATE STUDENTS IN MALAYSIA

Table 1 and 2 shows the growth of students' enrolment in the Public Higher Learning Institutions (IPTA) and the Private Higher Learning Institutions (IPTS) in various fields of study from year 2002 until 2009.

Fig. (1) shows, among the Science Degree students graduated from IPTS in year 2008, 46.43 percent of them are ICT students and 52.97 percent of them are ICT students in year 2009. On the other hand, ICT graduate students stand at 24.01 percent among the Science Degree students whom graduated in year 2008 from IPTA. However, in year 2009, among the science students, 24.08 percent of them were computer science students [6]. This shows the importance for HLI to concentrate more on the quality of the students that they are generating to boost Malaysian economy and to authenticate a job for the graduates.

Fig. (2) shows the number of foreign students enrolled in both IPTA and IPTS in Malaysia since year 2008 until 2009. This high volume in both local students and foreign students shows the importance of maintaining the quality of HLI in Malaysia.

3 UNEMPLOYMENT

3.1 Statistics of Unemployment

Based on Department of Statistics Malaysia (2009), the unemployment rate for the first quarter of 2009 was 4.0 percent. The unemployment rate in Malaysia is lower compared to most countries in the region [7]. However, Malaysia unemployment rate is still higher at 3.3 percent in year 2008 compared to its neighboring country, Singapore with 2.6 percent of unemployment.

In 2007, the official rate of unemployment released by National Bank of Malaysia was 3.3 percent. Annual reports published by the Human Resource Malaysia (2007) give indication of rising unemployment among graduates. Based on the Government publications of National *Bank Report & Labour Force Survey* in 2006, the DIB survey and other earlier studies, it was revealed that one of the main causes of unemployment among Malaysian graduates is mismatch between graduates' skills and employers' requirement.

In year 2009, Ministry of Higher Education (MOHE) in Malaysia conducted undergraduate student survey six months after their graduation. They identified that, approximate 71.8 percent of the students were still looking for suitable job after six months of their studies. Among this figure, 76.6 percent were IPTA students and 71.5 percent were IPTS students. Among the students graduated from HLI in Malaysia, 63.24 percent were degree students in year 2008 and 62.7 percent were degree students in year 2009 respectively. **Fig. (3)** shows the students feedback based on the research done by MOHE in year 2009 on nineteen IPTA which consist of 23,773 students and 138 IPTS on 6919 students on their position after six months after their graduation.

Based on the research done by MOHE (2009) on 23,773 were IPTA students and 6919 IPTS students on

their working status after one year after their graduation, the students' feedbacks were as shown in **Fig (4)**. **Fig. (5)** shows the working status by the fresh graduates from four major studies which comprises of Arts, Science, Technical and ICT from Malaysian HLI after six months after their graduation.

3.2 Unemployment Issue in Malaysia

In recent years, many countries including Malaysia have reported a rise in graduate unemployment due to mismatches between graduates' skills and employers' needs. Among 800 million people in the world, one-third of the labor force is unemployed or underemployed. This phenomenon is also seen in Malaysia. Among the Malaysian population of 27.73 million in year 2008 with 17,620.2 million populations between the age of 15-64, the unemployment rate of labour force are estimated to be around 3.3 percent [9]. This is supported with the research carried out by the National Higher Education Research Institute (IPPTN) in 2004 that, the major cause of unemployment is because graduates do not meet the requirements of their field of work. This is also further discussed by Malaysian Prime Minister during the Malaysian 2010 budget that, Malaysia's ICT industry is still facing a serious shortage of skilled IT professionals. He added that there are a large number of unemployed ICT graduates who do not meet today's industry requirements. He also argues that there is a growing mismatch of graduates' expectations and industry needs. From another perspective, the importance of Educational industry sector as a key element in the national agenda of 2010 of establishing Malaysia as a major destination for education in the region has also led to increased

scrutiny, regulation and evaluation of HLI. In this context, the need to ensure that the service provided is accurate, relevant, effective and efficient becomes extremely important. So, in order to produce quality graduates and to reduce the unemployment issue, the HLI need to ensure that the graduated students have the requisite skills, knowledge and ability to perform in a specific job function, now and in the future, that the qualifications they have obtained are supposed to prepare them for. With this background, Ausubel, D. [1978] argued that, the philosophy and rationale of Teaching & Learning activities are geared towards producing 'employable graduates' by preparing students to meet the employers' needs to convene today and future work, balancing the academic and practical aspects of work and study, developing innovative and multidisciplinary approaches to Teaching & Learning [8]. In order to deal with the cutting edge competition, the HLI management has to adopt new challenge in search for excellence in their HLI. The challenge is to overcome the mismatch of students' qualifications with employers' needs, lack of supply and demand information on labour market, lack of proper career guidance and information and to overcome the lack of exposure of students to the real world of work. The existing gap between students, HLI and employers can be reduced. For this purpose, this paper proposes a KM portal to enhance the quality and performance of students in Malaysian HLI. This paper attempts to discuss how KM is used to capture job market demand i.e. the employers' needs and mold the students with the perfect quality.

4 THE ROLE OF KM IN HLI TO OVERCOME UNEMPLOYMENT ISSUES

The objective of KM is to effectively utilize the knowledge and promote the knowledge sharing in order to achieve organization's overall innovation and continuous competitiveness. It is believed that KM can be used to support educational administration, which in turn supports teaching and learning [9]. In this study, KM is able to inform HLI and students on the current job market requirements to meet the industry's need. KM techniques and technologies in HLI are as vital as it is in the corporate sector. If done effectively, it can lead to better curriculum development, improve academic and administrative services, and reduce the costs. HLI can provide their students with the needed current market information in the portal. Therefore, HLI need to have a proper communication link with the employers through KM portal. HLI should evaluate the sort of graduates required by the job market to avoid mismatches between graduates' skills and the employers need. HLI need to give more attention on graduate issues such as unemployment and mismatch in supply and demand of HLI and employers. HLI should get the feedback from their students who returned from internship programme to see how well they can meet the employers' needs in their workplace. By doing so, HLI could identify their weaknesses. This can be achieved by KM Portal by developing a strong communication between HLI and students. HLI also could provide the latest information and give proper advices to their students who intent to start their higher education in choosing their courses based on their qualification and interest. HLI should provide relevant information regarding their future jobs for new

students, current student and graduating students. HLI also can develop strategies to coordinate organizations by knowing the market needs, ensure that HLI is offering the relevant courses and they should advice their students on the type of courses that they should take to secure the job that they wanted. These can be done by establishing web-based career guidance portals with KM. These can be achieved with the portal that connects the students, HLI and employer through a single portal as a hub. The challenge is to convert the information that currently resides in those individuals and make it widely and easily available to any HLI staff, employers and students who involve in the system. Besides that, the proposed KM approach on HLI should facilitate opportunities for pupils to take greater responsibility for their learning, be accessible from any computer from any location, give priority to teaching and learning sources by improving and updating the current HLI curriculum based on the employers' feedback to satisfy the employers' need. Besides that it also should promote learner autonomy, personalization of learning and closer employer, HLI and student links. Finally, it should improve internal communication between the students and HLI and improve the external communications which involve the HLI and employers as illustrated in **Fig. (6)**. The Knowledge Management Framework for HLI is shown in **Fig. (7)**. The most important concept in this framework is that, there must be two-way communication between student, HLI and employer. When they have vital information to share with others, they could be able to send that information to portal. So, others who require that information will be able to obtain it when they need it. This is shown in **Fig. (8)**.

5. PORTAL

5.1 Overview of Portal

This paper emphasizes the importance of introducing KM Portal to overcome the current problems in HLI. A portal is a gateway to other information and knowledge sources on an intranet or on the Internet, as indicated in **Fig. (9)**. It facilitates collaboration and provides a basis for workflow integration.

A web portal is a gateway or single access point to resources on the internet [10]. Portal can be seen as the hub which connects all the related entities from a single location. Bajec (2005) defined portal as a connection, content, commerce, and community [11]. Looney and Lyman (2000) indicated that, web portals collect a sort of applicable information resources into a single, "one-stop" Web page which helps to prevent users from feeling lost on the Web [12]. Aragonés and Hart (2002) stated that a portal provides a starting point for users to access and explore information on the WWW [13].

In this study, Portal creates a communication link between the students, faculty and employer. These improve the relationship and tighten the bridge between the students, faculty and the employer. It helps HLI in achieving best of communication levels and gain global exposure to their students. This portal allow them to discuss on the latest issues in the job market which helps HLI to design an efficient and accurate curriculum to produce the right graduates to meet the latest industry needs in the job market. Some of the roles of those actors in this research are shown in **Fig. (10)**.

6. RESEARCH METHOD

Data were gathered using three sets of questionnaires to analyze the 240 current students view and 350

graduated students view on employability. Questionnaires were also given to 152 employers to gather their view on ICT employability.

In the first survey, questionnaires were given to 240 current undergraduate students from Faculty of Computer Science and Information Technology (FCSIT), University of Malaya (UM), Malaysia. Participants were asked on courses, their knowledge on employability, satisfaction on their studies and finally get their feedback on the use of KM portal. In the second survey, 354 questionnaires were given to FCSIT, UM undergraduate students whom graduated since year 2000 until 2009. Finally, in the third survey, 152 employers were interviewed and given questionnaires to gather their feedback on ICT employability in current job market. Short interviewing was conducted to get an in-depth thought in these topics from the employers.

7. RESEARCH QUESTIONS

Generally, this research is carried out to answer the following questions. (objective 1 and 2).

8. RESEARCH FINDINGS

Data were analyzed using statistical analysis to answer research questions. The following are the results from the studies, presented according to the research questions.

8.1 Demographics of Current Student (First Survey)

Among the current students whom took part in the first study of questionnaire, 70.8 percent of the current students were female. Majority of the respondents were Muslim students which contribute 49.2 percent. 93.8 percent of the students were Malaysian students. All the respondents were current undergraduate degree students from

different major at FCSIT, UM. Their entire courses were taught in English. Among the students whom participated in the first survey, Bachelor of Information Technology in Management at 42.1 percent, 24.6 percent of the students were doing Bachelor of Computer Science in Software Engineering, followed by Bachelor of Computer Science in Management Information System at 19.2 percent, 9.2 percent from Bachelor of Computer Science in Computer Networking and System and finally, Bachelor of Information Technology in Multimedia at 5 percent.

8.1.1 Ways of Selecting Courses

Results from the first survey shows that, 61.7 percent of the respondents decided their course based on their friend's advices, 35.6 percent based on their parents advices, and 2.7 percent choose a course based on the HLI advice. This clearly indicates that, students do not have authoritative sources to refer to when selecting courses or major. 85.4 percent of the students mentioned that the main problems they faced when selecting major are lack of consulting sessions and insufficient information on the faculty website. 86.7 percent of the students emphasized that, selecting the right major can affect their future prospective jobs. Therefore, it is important for FCSIT to assist the students in making the correct decision on their courses.

It was found that email was the most popular channel used by 93.8 percent of the respondents. As majority of the students use Information Technology tools as a common communication method, it's an excellent thought to introduce KM portal among the current students. This is supported with the data that 67.9 percent of the current students prefer to use portal to share their knowledge. That shows

the importance of developing the faculty portal which allows HLI and students to share their knowledge. Messengers were at the second position (12.9 percent respondents), followed by face book (4.6 percent respondents) and telephone (11.7 percent). The least communication method used was face-to-face, which contributes 2.9 percent. These put forward this paper to develop KM portal to provide online information to the HLI and students by employers.

8.1.2 Intention of using the web portal

Based on the data collected, 91.7 percent have visited the existing faculty portal at least once since they enroll to their studies. Of these visitors, 61.7 percent visited once in a week, 27.5 percent twice, and 10.8 percent three to four times in a week. 63.8 percent of the students stated that the current portal of FCSIT is not easy to find the required information. Perhaps, this is the reason why 58.8 percent of the respondents spent only between 15 and 30 minutes on the portal, each time. 38.8 percent of respondents visited the portal to obtain information about courses; followed by those who want to get news (6.5 percent); check emails (51.6 percent); and other usages (3.1 percent).

8.1.3 Current Students' Feedback on Current FCSIT Portal

87.9 percent of the respondents confirmed that the current portal does not help them to choose a major or courses and 92.1 percent of respondents said that there is not enough information on the portal to help students to find for suitable job.

8.2 Demographics of Graduated Student (Second Survey)

Based on the 354 responders of graduated students in the second survey, 58.8 percent graduated

students were females and 41.2 percent were male students. Among the graduated students that were interviewed, 73.8 percent were Malay, 14.9 percent were Chinese, 7.1 percent were Indian and other race consists of 4.2 percent. Among the responders, 40.4 percent of the students were doing Bachelor of Computer Science in Software Engineering, followed by 26.3 percent Bachelor of Information Technology in Management, Bachelor of Computer Science in Management Information System (18.1 percent) and Bachelor of Information Technology in Multimedia (5.4 percent) and 9.9 percent from Bachelor of Computer Science in Computer Networking and System.

8.2.1 The Use of Portal

In general, most of the graduated students agreed that there should be a communication link through portal between student and another student which allow them to share many issues related to the activities within their faculty. 78.2 percent of the students agreed that they share their knowledge with other students related to their studies. It appeared that, 74 percent of the respondents used Information Technology to share their knowledge with others. 40.4 percent of the respondents willing to share the basic knowledge and 27.1 percent of the respondents willing to share technical knowledge. This is further supported with the fact that, 67.5 percent of the respondents proposed portal as the most popular point to share their knowledge. 71.8 percent of the respondents also feel that by linking the employer to the portal, it will encourage the students to work as a part-time worker with the employer during their studies. Besides it's supportive for the current student, the faculty could also include

the vacancy in Bulletin for finalist and recent graduates on a regular basis on the portal. 73.7 percent of the respondents believe it is important to include "The Career Service" on the portal which provide guidance in reaching decision about careers, assist students in finding employment and provide a standalone career module accessible to all students. 76 percent of the respondents also feels that it is important to upload information on workshops by HLI staff on Interview exercises, CV writing, application forms and Interview techniques on portal. Besides that, the HLI also get know the level of requirements in the job market related to the courses they are offering in their HLI. This could help HLI to prepare their students with the latest skills required in the job market.

72.6 percent of the respondents believe that it is important to include career modular programmes on the portal for students and to assist in the development of transferable skills. 76.6 percent of the respondents think it is important to market the university to the employer as it could improve the relationship between the employer and HLI. This could help the student to find a good employer that matches their qualification or the employer could employ an employee that matches their needs. It is believed that by linking the employer to the portal, the employer could use the space to advertise the vacancy with the university and recruit graduates and it will encourage the student to work as a part-time worker with the employer during their studies.

8.3 Overall Current and Graduated Students' Opinion on Unemployment Issues

8.3.1 Mismatch of Qualifications with Employers' Needs

Mismatch of qualifications with employers' needs means that knowledge taught in HLI and what is expected from the job market by the employers does not match. When the current students were asked the two major causes of unemployment in current job market, 91.8 percent of the students choose mismatch of qualifications with employers' needs is the major factor of unemployment. On the other hand, 98.9 percent of the graduated students feel that it is the major contribution of unemployment. This is supported with the result of the survey conducted by Bank Negara in year 2002 on "Employability of Graduates" discussed in length on this issue of skill mismatch. This survey concluded that the main reason for the increase in graduate unemployment was due to mismatch of graduates' skills with the requirements of the employers. Asma and Lim [2000]; Yogeewaran [2005] also argued on the issue of mismatch between what the local HLI are producing and what the Malaysian job-market seeks [14, 15]. Hesketh [2000] also supported this statement by arguing that, educated unemployment is due to a mismatch between the ambition of graduates and employment opportunities available to them [16]. Lack of appropriate skills to meet the job requirements of employers have been identified as one of the major factors.

8.3.2 Lack of Demand and Supply Information on Labour Market

Lack of appropriate and updated labor market information to HLI is another basis for the mismatch between demand and supply. There are also inconsistency between labor market demand and supply, with employers saying they cannot find right skilled people to fill vacancies, and yet the youth unemployment rate

is increasing. 24.2 percent of the current students and 15.8 percent of the graduated students feel that lack of demand and supply information on labour market is one of the causes of unemployment. Khoo.H.C. [2000] mentioned in his study that, there was mismatch in graduates' skills and the expectation of the employers in Malaysia [17]. He felt that this problem is due to the lack of information regarding the transition between higher education and work. Therefore, bridging the information gap between HLI, employers and students whom are looking for work is a practical strategy.

8.3.3 Lack of Exposure of Students to the Real Job Market

The partition between HLI and the world of work is imposed upon students by the educational systems. Similarly, social and cultural norms play a role in whether students are exposed to work environment. In Malaysia, a number of HLI does not prepare their students well for them to face the real working environment. 33.3 percent of the current students and 50.8 percent of the graduated students feel that lack of exposure also lead to unemployment. The graduated and the current students feels that the current curriculum does not give a chance for the student to get to know what is required in the job market in order for them to engage themselves in their future.

8.3.4 Lack of Proper Career Guidance and Information

85 percent of the current students and 98.6 percent of the graduated students feel that there is a lack of proper career guidance and lack of career information are root to unemployment problem for the students. This shows that, majority of the students do not choose their courses based on advices but

through general advices by parents and friends.

Besides that, 40 percent of the current students disagree and 25 percent strongly disagree to the statement that they get feedback from their seniors whom returned from their industrial training on their experience on-line. 20 percent of the respondents strongly agree and 52.5 percent agree that it will be very useful for them if the faculty could include the seniors' feedback on their working experience during their industrial pertaining, as part of the portal feature. This shows the communication link between the different levels of students are lacking in the current system. This is further supported with the statement that 77.5 percent of the respondents did not get their senior students' advices on their area of study and 80 percent of the respondents agree that they would like to get their seniors' advices on their area of study. 80 percent of the respondents believe that it is important to get information such as updates on the latest hard skills and soft skills mainly required from the employer for the current job market and on how to prepare the graduates to get the first job.

8.3.5 Lack of Soft skills

Soft skills are nontechnical skills such as communication, management, and leadership which are required for successful practice. Industry has also shown concern regarding the development of soft skills. As a result of the questionnaire, 12.1 percent of the current students and 6.8 percent of graduated students feel that lack of soft skills could cause unemployment among the fresh graduates. According to Wilhelm [2004], twenty-first century employers are seeking employees with polished interpersonal and foundation soft skills [18]. Unfortunately, the current

entry-level job candidates are lack of these skills as they do not experience proper practice in their HLI. This shows the importance of getting updated feedback from the employer on the required soft skills in the current job market. According to the executive director of the Malaysian Employers Federation, lack of communication and social skills, and the poor command of English are the two main reasons behind unemployment problem. This has also been supported by Zainal (2002) that, the high unemployment rate among graduates is not mainly due to the unavailability of job opportunities but rather because they fail to persuade the employers in their communication, thinking and language skills during job interviews [19].

8.3.6 Not "Work Ready"

Henwood [2007] stated that, the graduates cannot contribute to the company once they start working because they are not "work-ready". 43.3 percent of the current students and 24.9 percent of the graduated students agree that a group of fresh graduate students are not work ready [20]. This is supported with the fact that, a number of Malaysian universities are not producing "work-ready" graduates because the country's education system is too exam-oriented. In recent years, many companies do not trust new graduates, who may have learned 'mountains of' theories but lack of practical abilities.

8.3.7 Not challenging course syllabus

In Malaysia, most of the weightage of ICT course syllabus are on final examination. Only a small fraction of the marks will be allocated for the coursework which consist of assignments and projects. In some

HLI, the coursework also equipped with quizzes and test. This encourages the students to memorize mountains of theories rather than exploring and getting to know new information on the latest happening in the market related to their ICT courses. The course syllabus is not challenging and competitive enough to equip students with the computing skills needed in the job market. 4.2 percent of the current students and 3.4 percent of the graduated students feel that not challenging course syllabus is one of the factors that cause unemployment in the job market.

8.3.8 Other Skill Deficiencies

Finally, 2.1 percent of the current students and 0.8 percent of the graduated students choose other skills deficiencies as of the factors that cause unemployment. This is supported with the fact that, Woo [2006] argued Malaysian graduates lack the basic skills and knowledge that they were supposedly trained in their HLI [21]. The Minister of Human Resource (2006) said that most graduates do not interact actively when working in a team and are less committed to their work [22]. Norshima (2008) stated that there are lots of employers that want to expand their businesses and need people with the right skills [23].

When a number of current students and graduated students were interviewed, they suggested few other causes of unemployment among ICT graduates such as students do not explore to the job market, only good with theoretical and not practical, students focus solely on study and ignore soft skills, university do not emphasize on industrial skills, can't satisfy the company culture, lack of experiences, lack of skills, lack of working experience, students don't update their skills, employers have

high requirement on the fresh graduates and end with disappointment, university courses are not tailored towards industry demand, but are rather theory based. Majority of the students argue that another major cause of unemployment among ICT graduates are because of our current education quality, as it is based on memorizing, instead of applying the knowledge learnt.

8.4 Demographics of Employers (Third Survey)

Among the employers whom were interviewed, 63.8 percent were female and 36.2 percent were male. 83.3 percent of the employers had more than five years working experience. 85.5 percent of the employers employ ICT graduates. Among the employers employed, 66.4 percent of the employers offer internship programme for the graduates from various HLI in Malaysia. One of the main reasons for employing students for internship programme is a willingness to help HLI to provide skills for their students.

8.4.1 Employers' Feedback on Current ICT Job Market

A small group of the employers were not willing to take students for internship programme because they feel that the time frame given for students for internship program is short. They argue that it is not easy to train a student within the given period of time. 74 percent of the employers argued that, minimum 8 months is required to let the students familiar with their organization, culture and their system. 86.8 percent of the employers were willing to employ fresh graduates. Some of the main reason for them to do so is that, fresh graduates are not calculative as majority of the fresh graduate applicant does not request high salary. Besides that, they also

believe that fresh graduates learn new things faster than experience graduates. However, the employer also commented that, there were cases of dumping the fresh graduate resume in the first level as their expected salary is very high for their qualification. So, they advised the student to know their stand before applying for job.

Based on the employers' feedback, 67.8 percent of the graduates are educated with some of the skills for the job market, but not all the skills required. 27.6 percent agreed that graduates are not educated with the right skills for the job market and 4.6 percent of the employers agreed that graduates are educated with all or most of the right skills for the job market. These shows the HLI are not producing students with the right skills as the curriculum is not updated frequently as parallel to the speed of changes occurring in the job market. When the employers were asked on the major skills and qualities that are lacking when hiring fresh graduates, 88.8 percent of the employers stressed that the ability of students to work independently is most important. Followed by the ability to analyze and solve problems. 71.7 percent of them argue that good communication is equally important to secure a job. 28.3 percent mentioned that technical skills important for students. When analyzed the graduated and current students' data, it was found that that experience was one of the main factor that cause unemployment.

However, from employer point of view, only 10.5 percent of the employers stress that, working experience is an important qualifications to secure a job. All other skills such as good presentation skills, ability to develop creative and innovative enterprise solution, work attitude, educational level and team

leadership capabilities contribute lesser than 10 percent of the overall contribution. They also argue that, there are lack of communication skills, interpersonal skills, and a lack of understanding of business practice among the fresh graduates.

Phang [2006] stated that graduates lack skills means they are not able to impress employers during interviews because they do not have the right skills like presentation and communication skills which include proficiency in English [24]. 96.7 percent of the employers believe that it is important for HLI to have communication link with employer to keep their curriculum updated and current. This is supported with the fact that, 86.8 percent of the employers are willing to give feedback to HLI on their market requirements. These shows, the students' perception towards securing a job and employers' perception does not correspond. This could be improved by providing the KM portal.

8.4.2 Employers' Feedback on the importance of KM Portal

As the respondents were asked on the changes that can be done to reduce the gap between the skills the graduates acquire at HLI and the skills required in the job market by the employers, 87.5 percent of the responders agree that it is important to link the HLI portal with the employers. The responders also think it is important to market the university to them. 85.5 percent of the responders feel that it is important to include Industry Partnership features on the portal which bring positive outcomes for the industry and students. 88.8 percent agreed that it is important to get information from the employer on the latest hard skills and soft skills required from the employer for the current job market.

61.8 percent of the respondents argued that it is important to improve the quality of education in the area of course content, study materials and teacher quality. 19.7 percent of the responders feel that HLI should build a better communication link with the employers for HLI to aware on the important subjects to deliver to the students. 7 percent of the students sense it is important to offer courses that are relevant to employers demand. 11.5 percent feel it is important to teach more practical workplace skills and less theory. This shows the importance of linking the HLI and employers.

9. CONCLUSION

It is convinced that there are very strong benefits of adopting KM portal connecting HLI, Student and Employers. Such benefits include efficiency, effectiveness, consistency and better management and monitoring of the quality of Teaching & Learning Material in HLI. It also improves the mismatching between the students skills and employers' requirement. KM portal definitely will profitably generate graduates with most of the required skills and satisfy the employers' need. It helps HLI to improve their curriculum in a more efficient and effective way. However, most significant is that, everyone should be willing to inform and be informed all the time. Lack of information among any of these three groups consists of HLI, Students and Industry will bring a failure to the whole economy. Labor workforce will be defined on the basis of technology and technological know-how. This system has achieved the aim to be a single gateway for information sharing, as well as a dynamic link between students, HLI and the industry.

References

- [1]Uchida, Donna with Marvin Cetron and Floretta McKenzie (1996) *Preparing Students for the 21st Century*. American Association of School Administrators, 3(2), 11-12.
- [2]Clark W.J., Greer T. and Maier J. L. (2002) *Journal of Computer Information Systems*, 42(4), 44-49.
- [3]Prabhakar B., Litecky C. and Arnett K. (2005) *IT skills in a tough job market*. *Communications of the ACM*, 48(10), 91-94.
- [4]Couger J.D., Davis G.B., Dologite D.G., Feinstein D.L., Gorgone J.T. and Jenkins A.M. (1995) *IS' 95: Guideline for undergraduate IS Curriculum*. *MIS Quartely*, 19(13), 341-359.
- [5]Braun G.Y., Crable E.A. and Tesch D.B. (2004) *Journal of Computer Information Systems*, 44(3), 40-48.
- [6]Ministry of Higher Education of Malaysia (2009) <http://www.mohe.gov.my>
- [7]Department of statistics Malaysia (2009) <http://www.statistics.gov.my>
- [8]Ausubel D. (1978) *Review of Educational Research*, 48, 251-257.
- [9]Petrides A.L., Nodine R.T. (2003) *Knowledge management in education: defining the landscape, The institution for the study of knowledge management in education Press, USA*.
- [10]Wege C. (2002) *IEEE Internet Computing*, 6 (3), 73-77.
- [11]Bajec M. (2005) *The new gateways to Internet information and services*, 4(2), 252-269.

- [12]Looney M., Lyman P. (2000) *Educause Review*, 35(4), 28-37.
- [13]Aragones and Hart-Davidson, W., (2002) International Professional Communication Conference on Why, When and How do Users Customize Web Portals, Published by IEEE Xplore Digital Library, Portland, Oregon, 375-388.
- [14]Asma A. and Lim L. (2000) *Cultural dimensions of Anglos, Australians and Malaysians*, *Malaysian Management Review*, 36(2), 1-17.
- [15]Yogeesvaran K. (2005) Regional Conference on Investment Climate and Competitiveness in East Asia, Published by Economic Plan Unit Malaysia, 31-41.
- [16]Hesketh A.J. (2000) *Journal of Education and Work*, 13(3), 245- 271.
- [17]Khoo H. C. (2001) *Education Quarterly*, 19, 14–15.
- [18]Wilhelm W. J. (2004) *The Delta Pi Epsilon Journal*, 11(6), 105-121.
- [19]Zainal S.H. (2002) *Pengangguran dan Bahasa Inggeris*, In *Massa [Ed.]*, 62-63. Kuala Lumpur.
- [20]Henwood R. (2007) <http://www.asia.hobsons.com>
- [21]Woo K.Y. (2006) *JASA*, 17-21.
- [22]Department of Statistics Malaysia (2008) <http://www.statistics.gov.my>
- [23]Norshima Z.S. (2008) *Electronic journal of the American Association of Behavioral and Social Sciences*, 11, 1-16.
- [24] Phang S. (2006) Lack of English hinders Malaysian Grads. International Herald Tribune, Available at: <http://www.iht.com/articles/2006/12/06/bloombergsxmlalay.php>

OBJECTIVE 1	
Investigate the underlying reasons of unemployed graduates in Malaysia using FCSIT, UM as a case study.	
QUESTION S	1. What can the reasons of unemployment be? 2. Why: (i) there is mismatch of employee's qualifications with employers' needs? (ii) lack of supply and demand information on labour market? (iii) lack of proper career guidance and information? (iv) lack of exposure of students to the real world work?
OBJECTIVE 2	
Determine the importance of developing the correct curriculum to meet the industry needs.	
QUESTION S	1. How does the proposed KM Portal help HLI to improve their curriculum and equipped their students with the job market need? 2. What are the factors to focus before updating or modifying the curriculum?

Table 1- Total Number of Graduates Enrolment in Public Higher Learning Institutions

FIELD OF STUDY	2002	2003	2004	2005	2006	2007	2008	2009
Arts	84,31	90,92	91,47	95,686	111,8	138,0	146,8	147,73
Science	1	5	7	69,21	27	17	28	7
Technical	65,61	65,23	63,81	8	64,82	55,72	61,36	64,533
	7	5	3	44,24	1	1	8	59,742
	34,26	36,12	39,18	4	47,32	54,14	61,96	
	2	8	0		0	3	0	
Total	184,190	192,288	194,470	209,148	223,968	247,881	270,156	272,012

[8]

Table 2- Total Number of Graduates Enrolment in Private Higher Learning Institutions

FIELD OF STUDY	2002	2003	2004	2005	2006	2007	2008	2009
Arts	34,02	48,28	59,64	61,72	75,01	87,05	88,836	125,2
Science	5	5	3	4	2	5	39,261	49
Technical	22,44	30,05	30,79	29,25	36,39	36,29	23,494	42,39
	6	2	0	2	0	7		0
	10,59	12,29	14,89	10,41	12,66	17,34		31,12
	1	4	2	9	9	7		1
Total	67,062	90,631	105,325	101,395	124,071	140,699	151,591	198,760

[8]

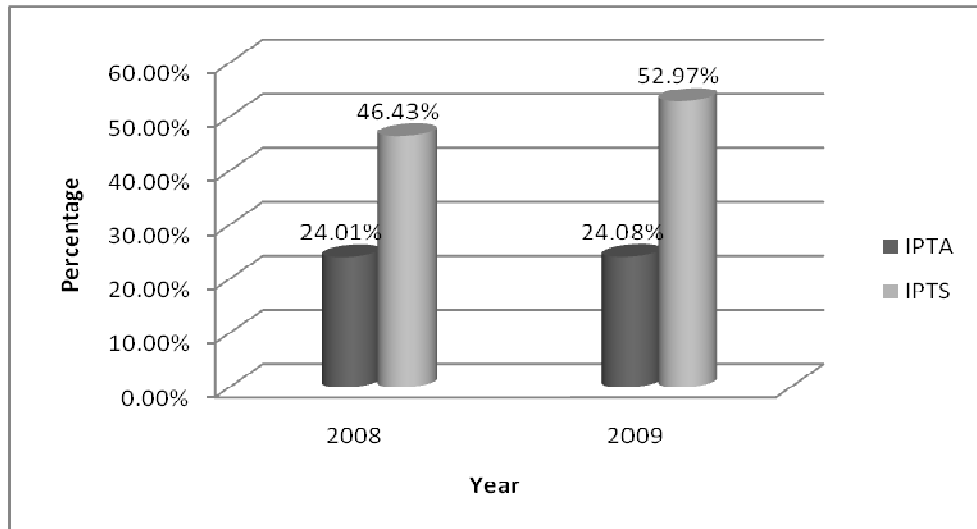


Fig. 1-Number of ICT students in IPTA and IPTS

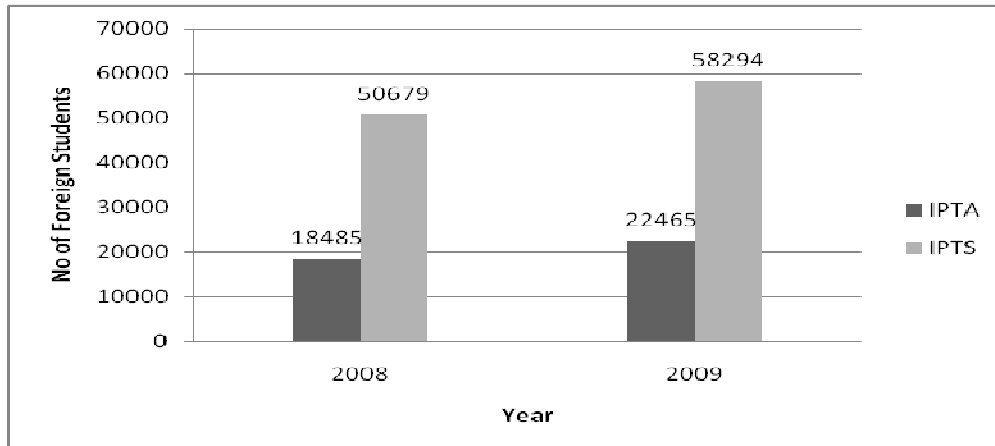


Fig. 2-Number of foreign students enrolled in both IPTA and IPTS in Malaysia

[6] Ministry of Higher Education of Malaysia (2009), available at: <http://www.mohe.gov.my> (accessed on 27 July 2010)

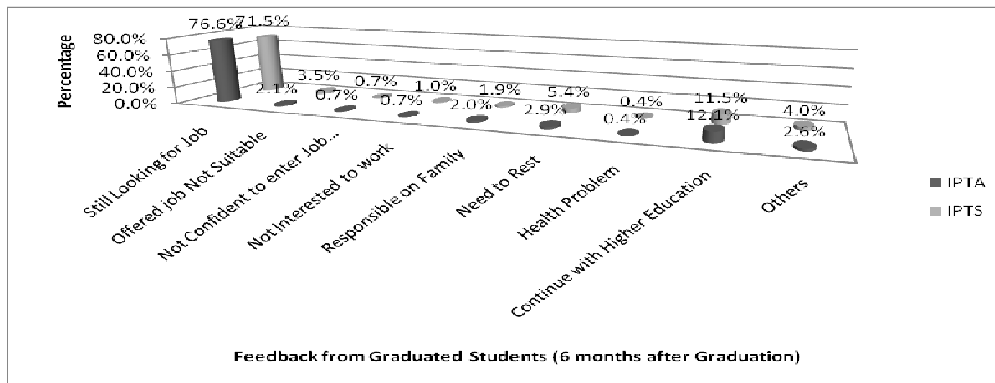


Fig. 3-Feedback from Graduated students on their status after six months after graduation

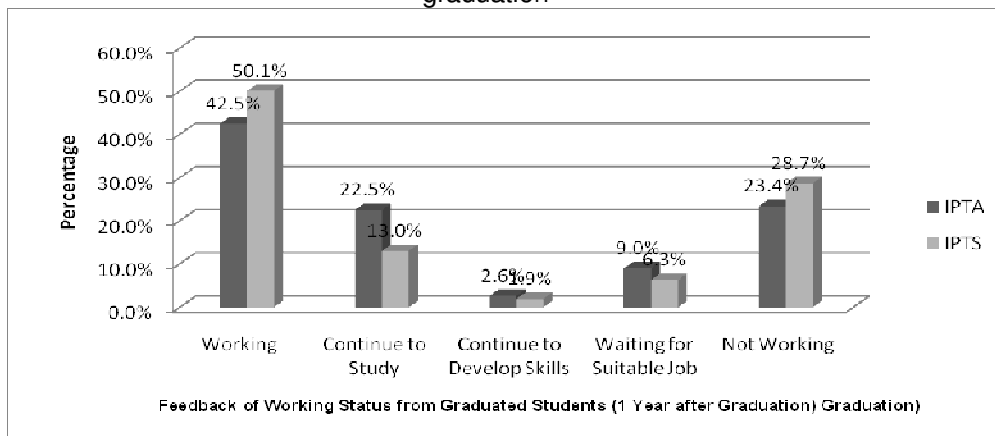


Fig. 4-Feedback from Graduated students on their working status after one year after graduation

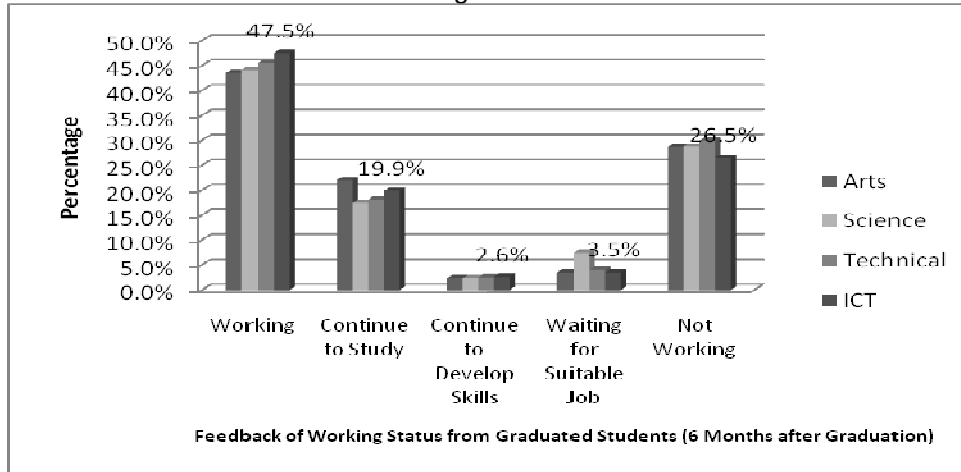


Fig. 5-Feedback from Graduated students on their status after six months after graduation

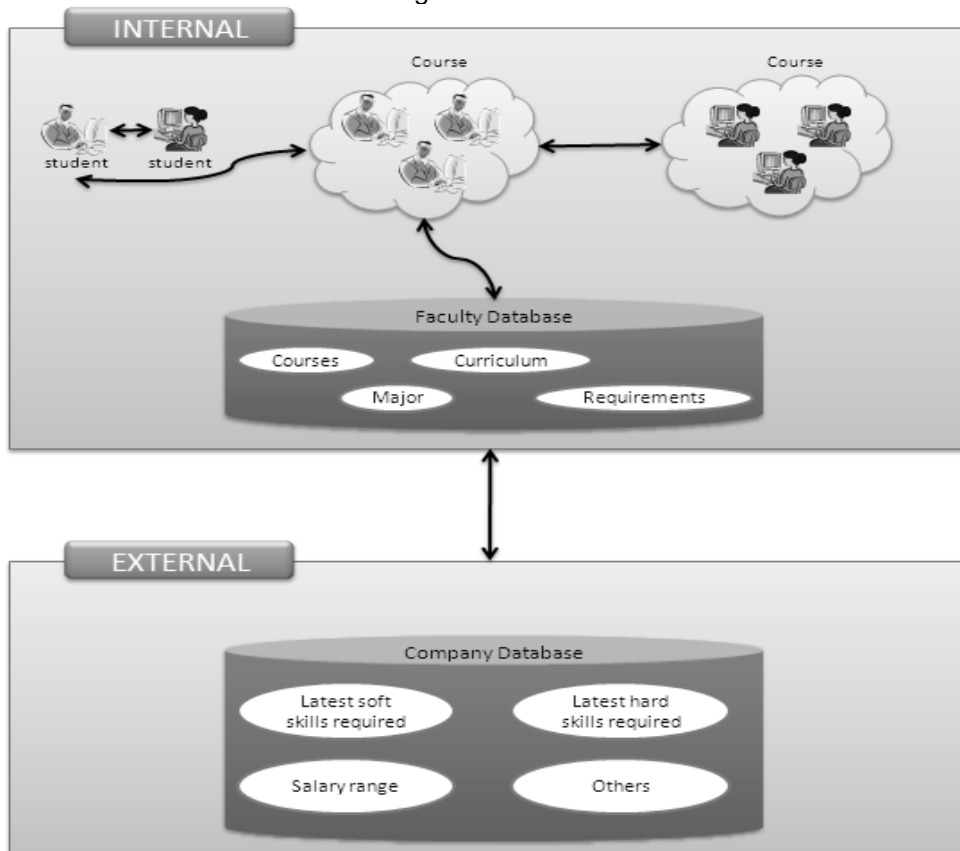
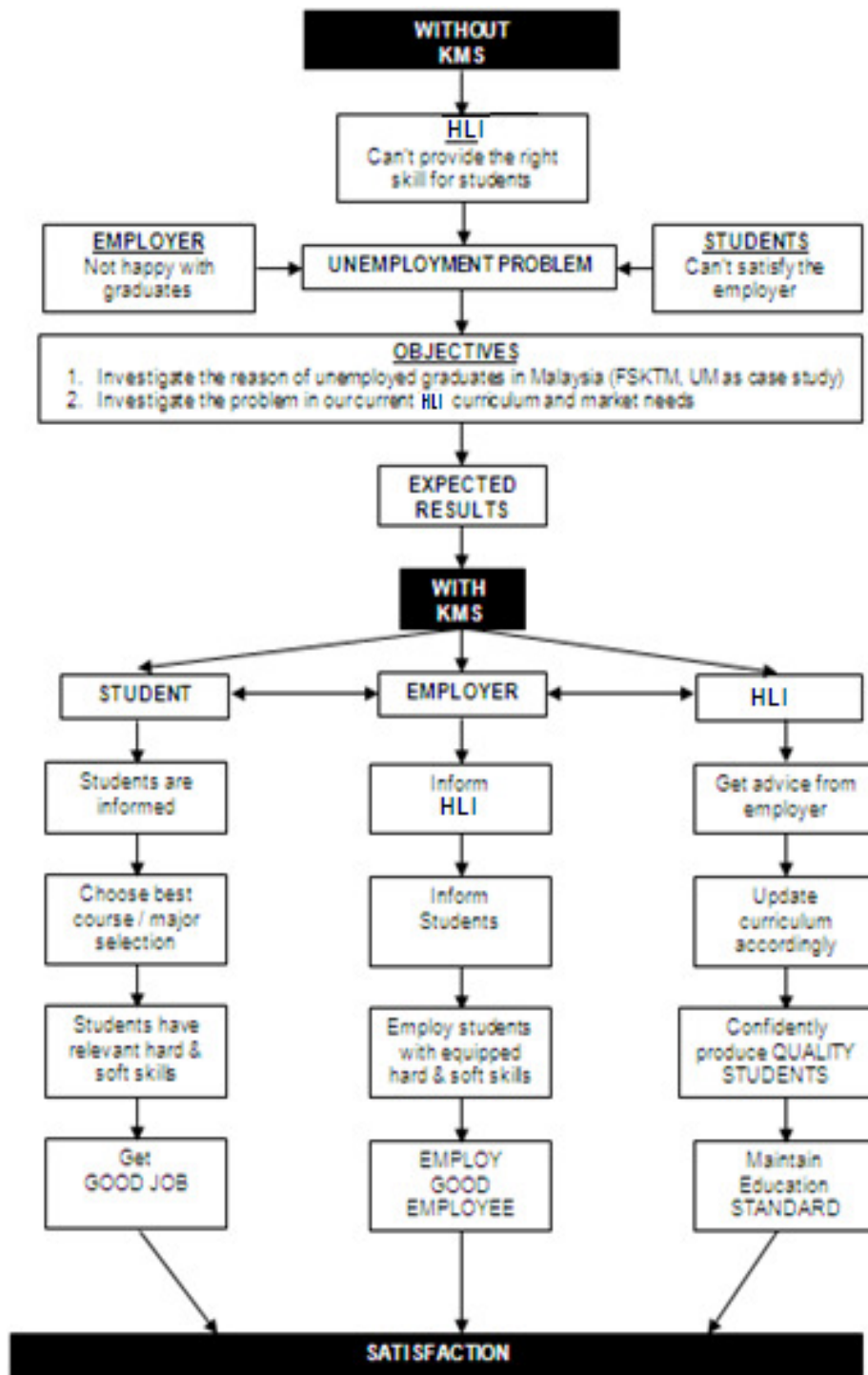


Fig. 6-Communication Link between Internal and External Environment



Knowledge management portal: connecting higher learning institution and employer

Fig. 7-Proposed Knowledge Management Framework for HLI



Fig. 8- 2-way communication between student, employer and HLI

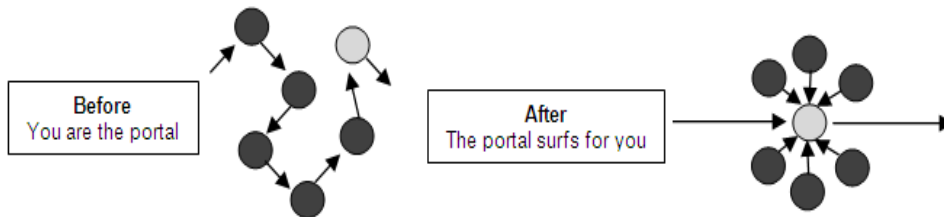


Fig. 9-The Role of Portals in Accessing Knowledge

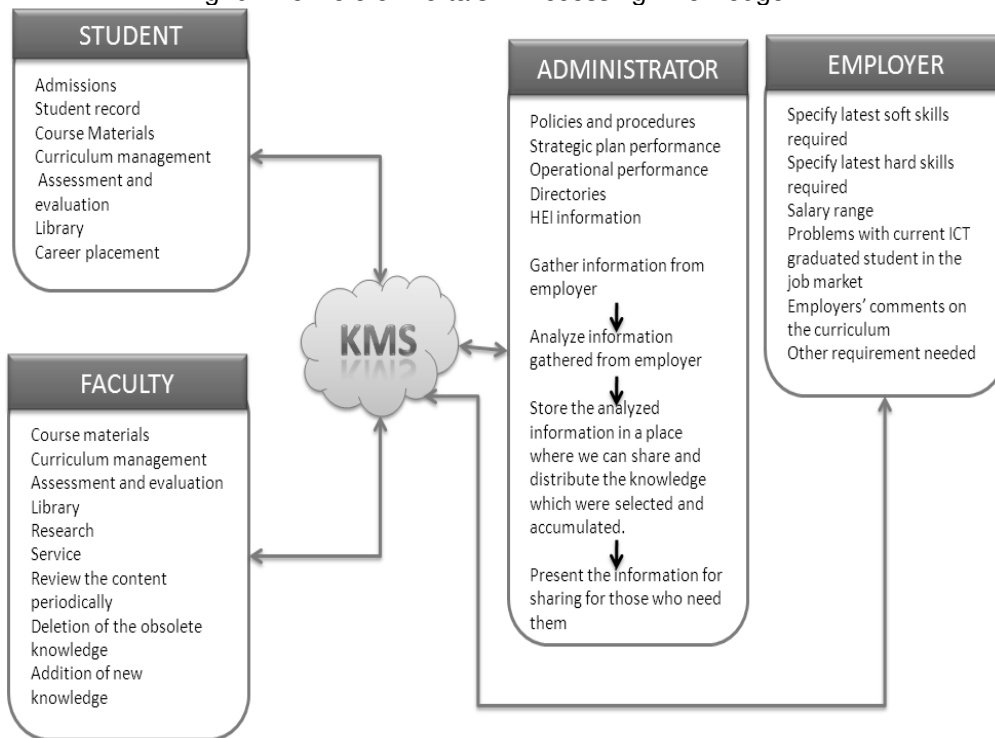


Fig. 10-Roles of Employer, HLI and student