EMPLOYABILITY ENHANCED EDUCATION - FROM THEORY TO PRACTICE

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Abstract: In the context of sustained growth and diversification of higher education systems in developing countries, society is particularly concerned about the quality of programmes offered to students and its suitability to their lives. In reality higher educational institutions strive to develop state-of-the-art programmes at huge capital investments for infrastructural developments, employing highly qualified academicians, and introducing innovative methods of teaching. Still the expectations of society on the employability of their graduates which they consider as the future are not fulfilled. As a result, there is an increase in awareness among the higher educational institutions to assess and suitably enhance their educational system to meet the needs of the society. As to facilitate the higher educational institutions, this paper proposes an operable approach to accommodate changes in educational curriculum and enhance academic standards to serve the society.

Keywords: higher education, employability, operable approach

1. Introduction

In the epoch of knowledge-driven economy and learning societies, both formal and informal education is playing an increasingly vivacious role in promoting economic solidity, social cohesion, individual growth, sustainable development, and a culture of peace and world citizenship. Whereas our views about the way we live, learn, work, and ‘think about work’ have changed, the attainment of knowledge and skills provided by a traditional formal educational setup do not correspond. Therefore, a new archetype must evolve that is developmental, human-centred, environmentally sound, and all-inclusive, so as to prepare learners to be contributors to knowledge and not just mere recipients of knowledge. It has opened up new challenges and opportunities for higher education institutions – whether public, private, or hybrid.

Higher education includes all types of educational studies, professional / technical training or training for research at the post-secondary level, provided by universities or
other approved higher educational establishments. Everywhere the higher educational institutions and universities are facing great challenges and difficulties [1, 2] related to
- Conducive working and learning environment,
- Employability of graduates,
- Enhanced staff and faculty development,
- Enrichment and preservation of quality in teaching and research,
- Equitable access to the benefits of international co-operation.
- Equity of conditions at access into and during the course of studies,
- Establishment of efficient co-operation agreements and
- Adequate financing for sustaining and development,
- Relevance of programmes,
- Skills-based training, and
- Social concerns

Higher educational institutions are expected [3] to respond societal transformations as shown in Figure 1 for their continued successful service:

- **Expandability:** The percentage of highly-qualified persons is increasing greatly world-wide. Changing employment trends and structures, increasing prospects of students and parents, and the academization of a growing number of professions, promote the expansion of higher education.
- **Diversity:** Apart from providing professional/technical/scientific training in a given subject, study programmes must meet differentiated social requirements and convey technical skills which higher education has not offered to a greater extent.
Concurrently, higher education institutions are to respond to the differentiating demand for higher education by offering courses beyond the main-stream.

- **Flexibility**: The fading of traditional professional patterns and growing individualisation call for a multiplication of study options. Individual combinations of studies should be allowed; students should acquire self-organisation and self-upgrading skills.

- **Quality**: Expansion, diversity, and greater flexibility presume and bring about novel approaches to quality assurance in higher education. The need to generate general social and political acceptance for higher education services, stakeholder expectations, supply-driven control of demand for higher education, the essential requirements of curriculum development, as well as performance assessment of teaching-learning processes result in new forms of quality assurance, quality documentation, and evaluation being implemented.

- **Employability**: Employability is to ensure a strong and secured link between higher education and external practice, since higher education which is purely based on technical contents is no longer considered adequate to meet the needs of professional practice.

There are several criticisms about higher learning institutions concerning on their primary goals, curriculum design, implementation, assessment, duration of the programmes offered, and the cost of education and linearized learning. In spite of such criticisms, higher education is progressing with new opportunities relating to technologies that are improving the ways in which knowledge can be produced, managed, disseminated, retrieved and controlled. Even-handed access to these technologies should be warranted at all levels of education systems.

2. **Higher Education in Practice**

Realizing the societal transformations, the expectations of students and parents and the competitions among the universities and higher educational institutions, the most popular approach being adopted is Outcome based education (OBE) which is nothing but a recurring education reform model. It is a student-centred learning philosophy that focuses on empirically measuring student performance (outcomes). OBE contrasts with traditional education, which primarily focuses on the resources (inputs) that are available to the student.

While OBE implementations [4] often incorporate a host of many enlightened didactic models and ideas, such as reform mathematics, block scheduling, project-based learning and whole language reading, OBE in itself does not specify or require any particular style of teaching or learning. Instead, it necessitates that students exhibit that they have learned the required skills and course content.

The major distinguishing characteristics of outcome-based curriculum design and implementation [4] are as follows:

- Underscores the educational experience being learner-centred, interactive, and activity-based instead of being teacher and content based.
Focuses on formative on-going assessment albeit not to the exclusion of summative assessment.

- Considers lecturers as mediators between students and learners rather than dictators or mere facilitators.
- Opportunities for active learning for students.
- It follows a design-down approach in the provision of knowledge.
- It follows an up-ascending process for the realization of outcomes.
- It underscores the importance of improvement through evaluation and feedback.
- It contributes to the higher education institutions’ transparency and visibility.
- It contributes to the mobility of both academic staff and students.
- It contributes to the employability of the graduates of higher education institutions as it provides them with candidate profiles specifying the required professional and practical skills, interpersonal skills, and communications skills required for the job and
- It enables parents and students to choose the appropriate line of study

There are three main reasons for adopting OBE:

- One reason for adopting OBE is to design and implement curriculum as an integral component of quality assurance policy. Figure 2 illustrates an outcome-based curriculum design and implementation model [4].

- Another reason is as response to the fact that most higher education stakeholders (students and their parents, university and higher educational institutions academic staff, university / institutions administrations, accrediting boards, Ministries of Higher Education, and employers) consider the educational system lacking in preparing students for real life and market demands and
are calling for improved curricula, teaching and learning materials and methodologies, evaluation procedures, and rigorous tools of accountability and

Third reason being: to provide excellent education based on recent research findings, to play a major role in the development of human capacity, to provide students with the appropriate academic, cultural, professional, and social environment conducive to the development of their knowledge and intellect, and to contribute and enhance student employability and mobility.

However in practice, OBE generally promotes curricula and assessment based on constructivism methods and dejects traditional education attitudes based on direct instruction of facts and standard methods. Though it is claimed the focus is not on "inputs", OBE generally is used to justify increased funding requirements, increased graduation and testing requirements, and additional preparation, homework, and continuing education time spent by students, parents and teachers in supporting learning.

3. Outlooks

The student’s experience has become an important dimension in the measurement of quality of education. The nature of student expectations and the institution responses are undoubtedly complex issues, poignant on almost all aspects of higher education. Four decades before [5], students and parents at university and higher learning institutions generally expected:

- A place of academic learning and reflection,
- Enhanced employment prospects,
- No concept of expectations of other stakeholders,
- Support by government funding and scholarships,
- Teacher-student relationship to be one sided,
- To obtain a degree within a stipulated period of time, and
- Very few expectations on teaching quality

But today, students and parents expectations are now high [2, 6] and these include:

- A bilateral communication process between themselves and with the institutions,
- Access to state-of-the-art technology,
- Accurate information about their courses, assessment procedures, complaints process, etc.
- Cost-effective education and scholarships,
- Employment centric education and training,
- Employment opportunities through campus interviews,
- Flexibility and choice in the delivery of education,
- Honesty with respect to whether their needs can be met or not,
- Industries and Institution partnership,
- To be consulted about their learning experience
The above expectations are now of greater complexity and a different order to those that happened four decades before. The main reason for such a drastic change in their expectations is: students consider the higher education as a commercial service and perceive themselves as customers of the educational commodity. This is partly as a result of the fee payments by students (or their parents) directly to the cost of their education, and partly because of the growth of consumerism in public services such as the higher education. Institutions now find themselves being hard-pressed on the one hand to respond to mounting students and parents expectations, while on the other there are qualms that the fundamental purpose of higher education could be slanted or even lost if institutions go too far in the direction of placing higher education on a commercial footing.

Universities and higher learning institutions need to take a more premeditated approach to the management of student and parent expectations. This management might take the form of spelling out more clearly to students what they will experience and in addition be prepared to change student expectations. This is especially important in light of evidence [7] that suggests that student expectations can be shaped significantly by a two way dialogue between ‘provider and customer’.

4. Bridging the Gap

Advancing, acclimatizing and broadening the skills portfolio of individuals to create and fill the jobs of tomorrow is one of the greatest challenges facing all nations today. Each person desires to rise up and be more determined for the future - individuals, public and private employers, the education sector and governments at all levels. Enlightening skills is a real ‘win-win’ necessity for all – for the economy, for the society, for the public and private employers and, of course, for individuals themselves.

Another major challenge is to ensure that people have the right skills. This is not just a question of short-term employability, but of our capacity to acclimate and shape the jobs of tomorrow. During the last decade, education and training systems have become more appropriate and receptive to the needs of society; but labour market mismatches existed and created unhealthy situation of both skill inadequacies and skill gaps with unemployment.

As observed [7, 8], education moulds a country’s social, cultural, economic and radical development. Hence, the curriculum should be such that it would promote and enhance job opportunities for the graduates and thereby diminish unemployment. In the modest knowledge-economy, the competencies and capabilities should be planned and upheld to suit the changing demands and requirements of the world.

There is a growing awareness of the importance of higher education in providing the innovation and creativity for the development of a knowledge-based economy in an increasingly competitive global market. Both higher education and the graduate labour market are changing rapidly. The student intake is becoming more diverse, in age, background, previous educational experience and interests and ambitions although
efforts to broaden the social base of the graduate population has been characterised as a limited success.

It has become more important for industry to be more engaged in education. Firstly, there must be a way for employers to convey what they need from educators. Secondly, in-work education should be improved across the board and should be scalable to the wider population rather than delivered behind closed doors. And thirdly, there are few links between education and career progression - graduate employment and career paths shall go beyond the first destinations of graduates.

In order to match the skills of university graduates with the needs of the industry for better employment, the employers expect to change the traditional curricula as an emerging curricula as indicated in Table 1.

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<tr>
<th>TRADITIONAL CURRICULA</th>
<th>EMERGING CURRICULA</th>
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<td>Knowing That</td>
<td>Knowing How</td>
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<td>Written Communication</td>
<td>Oral Communication</td>
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<td>Personal</td>
<td>Interpersonal</td>
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<td>Internal</td>
<td>External</td>
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<td>Disciplinary Skills</td>
<td>Transferable Skills</td>
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<td>Intellectual Orientation</td>
<td>Action Orientation</td>
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<td>Problem-Making</td>
<td>Problem-Solving</td>
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<td>Knowledge as Process</td>
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<td>Understanding</td>
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<td>Concept-Based</td>
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<td>Pure</td>
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<td>Proposition-Based Learning</td>
<td>Experiential Learning</td>
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Table 1: Traditional and emerging curricula

This curriculum development should be a collaborative effort of the employers, students and the institutions that takes into consideration the needs of various stakeholders in an effort to design the most effective learning experiences needed to close the gap between knowledge and application, or capability and competency, thus augmenting employability.

Apart from such initiatives, there is a mounting propensity towards an assimilated approach to employability development that includes implanting the development of student personal attributes within the subject curriculum. The identified attributes are presented in Figure 3.
Good curriculum designs will continue to help learners to construct understandings of the subject matter and maintain the more recent interest in developing a number of skilful practices, or ‘skills’. However, they will also show care for the development of constructive ability beliefs, and other complex achievements that employer’s value such as (Figure 4)

The current changing business environment emphasize the importance of education for employability, focusing on the development of key skills and work experience. Development of graduates from theoretical background to the practice is a present day need because the practice will enhance the employability of graduates. Participation of graduates in the training process and obtaining the feedback from the stakeholders are important for understanding the trainee graduates’ future skills development areas [8]. In recent years, there has been a strong emphasis on providing on work related training
for graduates as a part of their degree program. Completion of industrial training of a specific duration by graduates is an important expectation of employers. During the training period, graduates get their first experience on the real working environment, and an understanding on working patterns within an organization. Training satisfaction is a measure of the attitude that individuals develop about the training undergone and is based on individuals’ perceptions. This is an indicator of the outcome of training on individual trainees.

In order to enhance the employability of graduates, based on the above analysis, five attainable approaches are highlighted as in Figure 5 and discussed in the subsequent paragraphs.

**Figure 5: Ways of Employability**

*Work Experience:* Work experience may become a passport with entry visa to employability where employers use industrial work placements as a central part of their graduate recruitment processes. Some employers prefer to recruit from placement students since they have had an opportunity to evaluate them up in the workplace and know much more about their suitability for a particular job than any degree transcript or assessment centre could tell them. So, a way of increasing students’ competitiveness in the labour market is to incorporate industrial attachment into the educational structure. However, there are certain issues such as the time duration of industrial attachment, quality of the attachment and reported learning benefits.

*Curriculum Auditing:* Curriculum auditing offers a way of testing how and where employability related learning is incorporated into curricula and where there might be gaps. Good learning and employability intentions need to be supported by learning, teaching and assessment approaches that are consistent with curricular intentions [9].
By introducing entrepreneurship modules through the whole curriculum and delivery by industry people rather than an academician stimulates complex learning achievements that underlie entrepreneurship requirement. Programmes should be designed with employability policy in mind. Support for employability can be incorporated into curricula in a range of ways: there is no ‘one size fits all’ solution.

**Career Guidance:** Employability is generally measured in terms of the percentage of students got employment offer letter while leaving the institution after graduation and those employed within 6 months after graduation, then an institution’s contribution to student employability (and its performance in this respect) could be related to the quality of its careers service. Good career guidance is unavoidable! Guest lectures by industry professionals, model interviews, job fairs, seminars organised by students are few of the possibilities to enhance career skills.

**Industry Replica Training:** While framing curriculum, significant importance should be given to develop hands-on training following the principles taught in lectures. Laboratories should be of industrial nature and trainers need to be with industrial exposure. Lecture sessions and laboratory sessions need to be at equal proportionate and there shall be an exclusive assessment for the laboratory practices like theory examinations.

**Records of Achievements:** A set of achievements such as skills, understandings and personal attributes make graduates more likely to gain employment and be successful in their chosen careers, which benefits themselves, the workplace, the community and the national economy. Collecting and presenting supportive evidence; identifying and then acting on priorities for development would improve employability.

The successful implementation of the above suggestions gives room for enhancing the employability of students and meeting the expectations of students, parents and need of the day.

**5. Conclusion**

Higher education is increasingly viewed by both students/parents and the general public as primarily a private benefit, rather than a broader social good. But in reality, higher educational institutions greatly develop state-of-the-art programmes at colossal capital investments for infrastructural developments, employing highly qualified academicians, and introducing innovative methods of teaching. However the expectations of society mainly on the employability of their graduates which they consider as the future are not fulfilled. This paper addressed the changing educational scenario and suggested five operable approaches for universities and higher educational institutions to enhance employment opportunities. The outlook of the authors is that the day students get their degree certificates; they should be able to get their employment orders also. Such a situation will be one of the measures of evaluating the standard of universities and higher educational institutions in the near future.
References


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Bio-data

C. Palanichamy, native of Madurai, Tamil Nadu, India earned the BE (Electrical and Electronics), M.Sc. Engg. (Power Systems) with Distinction and Ph.D. (Electrical), all from Madurai Kamaraj University, India. He secured University First Rank in his undergraduate as well as in postgraduate studies. He is a recipient of Gold medal as the best outgoing Engineering student, 1976. He started his academic career in 1979; he served in India, Iraq, Malaysia, and Ministry of Education Brunei Darussalam and at present he is with Curtin University Sarawak, Malaysia. While he was with Ministry of Education, Brunei Darussalam, his academic performance was commended as excellent consecutively for 8 years. He is an eminent educationist and professor who held leadership positions such as Principal of premier engineering and technical colleges as well as University Vice-Chancellor in-charge in India. As recognition of his contributions to engineering and technical education, he was appointed as the first Syndicate Member of Anna University of Technology, Chennai in year 2010. He is one of the share-holders of Vaigai Engineering College, Madurai, Tamil Nadu.

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Working as a Senior Lecturer in the Department of Electrical and Computer Engineering at School of Engineering and Science at Curtin University, Malaysia for the past 12 years; He earned his undergraduate and Post graduate degree from Bharathidasan University, Trichy, India. He teaches different disciplines programs such as Computer System Engineering, Computer Science, and Bachelor of Technology. He served 19 years plus in teaching industry and held various positions Deputy Principal, Head of department and Course coordinator. He has guided Number of final year projects to B.Tech and B.Eng students at various institutions. He is a Certified Network Associate instructor for teaching the CISCO, CCNA programs at Curtin Sarawak. His areas of research include, Computer Programming, Data communication and Networking and Cloud Computing.