**Perceptions on Industry Placements: An Exploratory Study of Academics in Malaysia**

## Introduction

This paper reports and discusses the finding of an exploratory study, conducted at a university in Malaysia towards the end of 2009, on the perception on the value of an industry placement. The data was obtained through the administration of a written survey to business disciplines academics. Participation in the survey was voluntary and a further follow-up semi-structured personal interview was conducted with five participants who elected to do so.

The paper firstly provides some background to the changing landscape in higher education during recent times that appear to be a global phenomenon. This is followed by a description of the general composition of the Malaysian education system and funding for higher education. A definition of industry placement is provided next, together with a summary of benefits extracted from existing literature. This is followed by a relationship diagram, and a previously developed industry placement conceptual framework, that views this from the lens of Lave and Wenger's (1991) notions of a community of practice. The model is 'tested' for relevance with the findings from this exploratory research. Some comments are provided about a recent Australian government initiative designed to foster closer collaboration between academics and industry, and its application to Malaysia is considered in the paper, before reaching a conclusion.

It should be noted that in this paper the words teacher and academic are given the same meaning and are used interchangeably

## Background

There is "international consensus that the reach, quality and performance of a nation's higher education system will be key determinants of its economic and social progress" (Sharpe, 2009). In recent times, the traditional role of universities has been witnessing a high degree of focus from governments and industry alike. There appears to be a 'questioning' of the value of higher education outcomes, with some claiming that these are too theoretical and 'far removed' from daily business processes. In particular, the focus is on providing job ready graduates who may be able to make an immediate positive contribution to the firm 's productivity. This shift in educational outcomes has been influenced by a number of factors. These include globalisation and the opening of markets, with the potential for greater labour force mobility; changes in technology and subsequent changes in work practices that have also influenced changes in the organisation of work, resulting in "changing conceptions of knowledge skill and learning" (Chappell, 2004, p. l). Despite universities being charged with the "task of critically transmitting knowledge, bringing together teaching and research in an inseparable union" (Roversi-Monaco, 1998, p. 3), these institutions of higher learning have gradually transformed from providers of educational services for "the public good and the community" (Star, 2007), to being "conceived as corporations providing a private good for individual consumers" (Star, 2007).

In Australia, there is little doubt hat the modern university is far different to that of the early 90s and the work of academics has changed considerably over this time driven by the efficiency and accountability agenda. In taking stock of these changes, it needs to be recognised that often the cry for efficiency and accountability has been used as a mechanism for cost control, cost reduction and to drive particular policy agendas (Kenny, 2008, p. I l)

There has been a general trend for universities to increase their community engagement, especially in the industrial sector, in order to more closely align curriculum content to industry practices. These changes are not unique to Australia. For example, in the European Union (EU), community engagement is evident by the roll-out of the Bologna Process towards 2020, where employability is a key consideration:

> higher education should equip students with the advanced knowledge, skills and competences they need throughout their professional lives . . . we aim at . . . maintaining and renewing a skilled workforce through close cooperation between governments, higher education institutions, social partners and students. This will allow institutions to be more responsive to employers' needs and employers to better understand the educational perspective (Communiqué of the Conference of European Ministers Responsible for Higher Education, 2009).

The notion of a closer alignment between theory and practice in the curricula of educational institutions is also the wish of Malaysia, the focus of this paper, as according to the Malay-Sian National Higher Education Action Plan 2007-2010

greater collaboration between HEIS [Higher Educations Institutions] and leading local and multinational corporations, and top international institutions will be forged to build staff development programmes. These programmes will be designed to benefit academic staff from both private and public HEIS and may take several forms such as training, joint research, attachments and staff exchange programmes (Ministry of Education, 2007, p. 24).

Similarities can be observed between the Bologna Process and the Malaysian approach in relation to the forging of close relationships between the academic world and industry and, in the case of Malaysia, there is also a reference to the up skilling of academics - an issue of particular interest in this paper. Indeed, it has been claimed that in Malaysia "universities...must form strategic partnerships with the industry to help provide jobs for graduates... who could meet the country's requirement for a developed nation status" (Chow, 2010.
p. 22). It is now appropriate to outline the education system in Malaysia, and this is provided in the next section.

**The Education System in Malaysia and Funding for Higher Education**

A summary of the Malaysian education system hierarchy is shown at Figure l

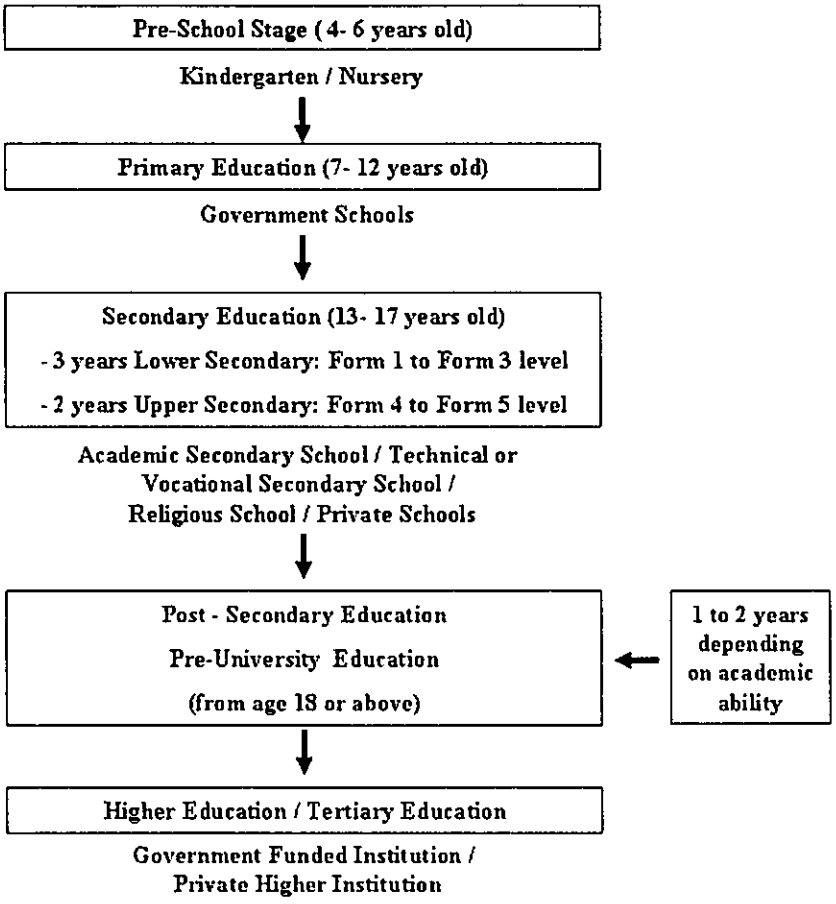


*Figure l : Malaysian Education System Hierarchy*

There is a significant proportion of private education offered in Malaysia, but this is primarily at the post-secondary level. "The government provides more than 95% of primary and secondary education" (Tawau City, 2009). In the primary sector there are special Tamil and Chinese schools catering to these two population groups that respectively account for approximately 30% and 10% of the population. There are also Chinese private secondary schools and these are subsidised by the government. Additionally, there is also a system of Islamic religious schools at the primary and secondary levels, and these are funded by their respective states and managed by those states' religious authorities. Free education in public schools is provided at the primary and secondary levels for 11 years, after which "free education is no longer automatic but it is subject to the individual's academic performance and financial capability" (Tawau City, 2009).

The "Malaysian Government provide[s] 60% of the tertiary education, with the private sector providing the balance [of] 40% (Goodrich Harwood, 2008). A significant proportion of private education in Malaysia is offered through local universities and university colleges pursuant to twinning arrangements with foreign universities, predominantly from the United States of

America, the United Kingdom and Australia — it is generally accepted that these countries are the 'powerhouses of international education'. These foreign system schools offer their instructions in English and use an international curriculum. These organisations are not "bound by the Education Act 1996 but are under the supervision of the Ministry of Education" (Tawau City, 2009).

In Malaysia, the majority of funding for universities has traditionally come from government sources, as education account[s] for 15.6% of the 2010 Federal Budget of RM [Malaysian Ringgit] 191.5 billion as Malaysia is the 7th largest spender on education as a percentage of total government expenditure in the world (Jagdev, 2010, p. 19).

However, the impact of the recent global financial crisis is pressuring the Malaysian government to make savings in expenditure, and it is touted that as for higher education, gone will be the days where fees of foreign students are subsidised [and] fees charged for local tertiary students will be increased (Jagdev, 2010, p. 19)

It is interesting to note the existing tension between the National Higher Education Plan 2007-2010 and the economic fallout of the recent global financial crisis. These two factors operate in opposite directions in terms of funding availability and, consequently, the implementation of the initiatives outlined in the plan may be delayed.

Although at the time of writing this paper it was not certain whether the Malaysian government would proceed with cuts to university funding, there is no evidence to suggest that academics will not be able to pursue 'attachments' to industry, that is, a secondment to industry for the purposes of professional development — in other words an industry placement opportunity. This is discussed in the next section.

**Industry Placement: Definition and Summary of Benefits**

For the purposes of this paper, an industry placement is defined as a voluntary period of time spent by an academic on secondment to a host firm, to perform previously agreed duties. The industry placement may be viewed as a form of professional development for the academic. The main purpose of the industry placement is to generate mutually beneficial outcomes for the key stakeholders involved in the educational process, identified as: the academic; the educational institution; the host industry; and students. The relationships of an industry placement environment are formed within a Higher Education context and influenced by government policies, as shown in Figure 2. The various relationships that are formed among the key stakeholders should contribute to the acquisition of knowledge and skills as a means to enhance capacity building in the immediate community. Education has an important role to play in society as among the "social goals of a nation . . . education . . . [is] essential in the making of a people-centred nation" (Sivamurugan, 2010, p. 9).

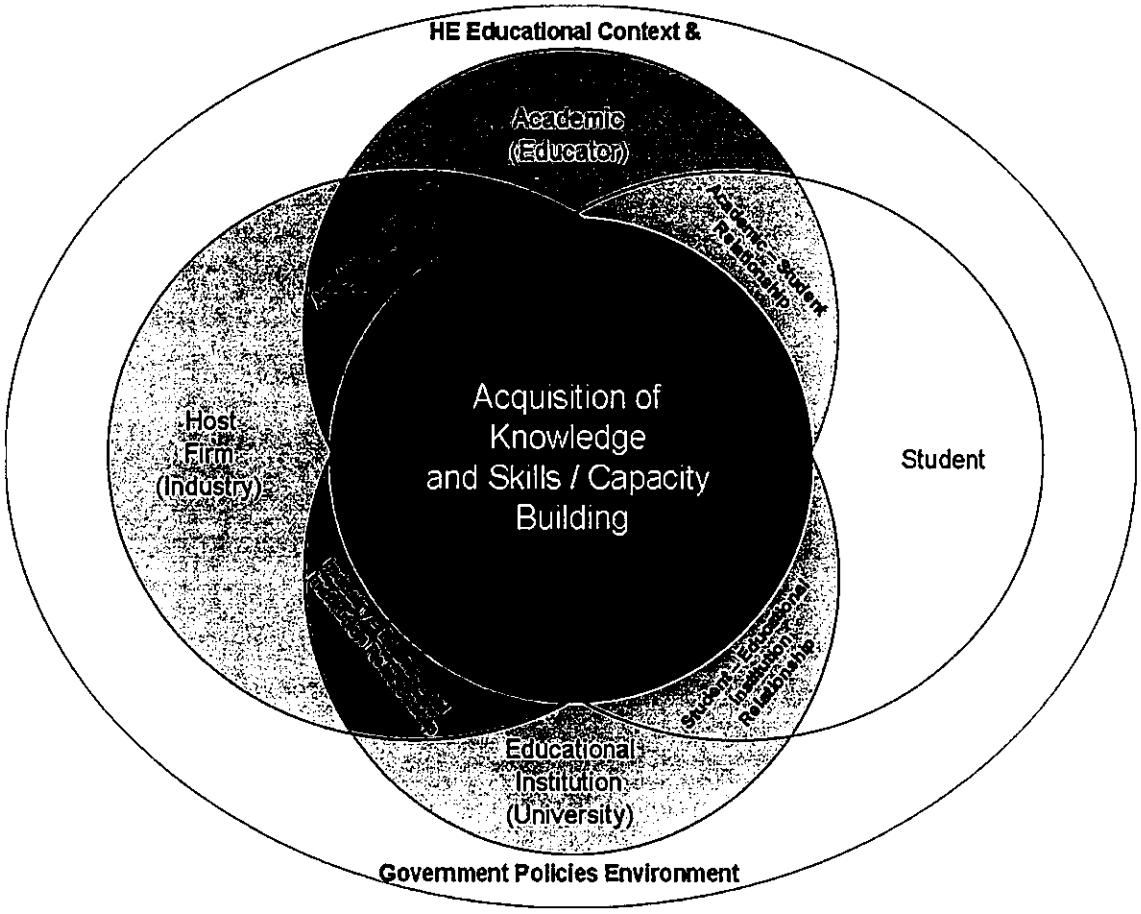


*Figure 2: Industry Placement Relationships (Bergami & Schuller, 2009, p. 64)*

The various benefits of an industry placement have been highlighted in previous literature since the 1990s (Brown & Chalmers, 1990; Ireland, 2002; Ling & Mackenzie, 2001), but there appears to be little research on professional development practice outcomes. The benefits that may be derived from an industry placement include:

- Enabling teachers to enhance the student's educational experience by enriching the curriculum with current knowledge, perspectives and skills gained whilst working in industry (Brown & Chalmers, 1990; Haigh, 1997; Ireland, 2002; Jones, 2007; Klein, 2001; McGavin, 1996b);
- Developing business networks and professional contacts for the teacher to use as a resource (Haigh, 1997);
- Career enhancement for the teacher (Leary, 2005);
- Making links between theory and practice through sharing the curriculum with industry and the use of authentic materials and resources (Ireland, 2002; Klein, 2001); . Opportunities for teachers to become consultants to industry (Ireland, 2002);
- Enhancing the reputation of the host firm in the community (McGavin, 1996a); and . Providing the host industry with access to a potential pool of new employees (Brown & Chalmers, 1990).

Some emphasis has also been given in the literature to the links between understanding and contextualised learning (Arnold & Smith, 2003), and this is relevant because the industry placement provides an in situ social context for learning. The teacher is immersed in a community of practice as a legitimate peripheral participator (Lave & Wenger, 1991). The notions of community of practice and legitimate peripheral participation are considered in the next section, within the context of a theoretical framework.

**Industry Placement Conceptual Framework**

An industry placement conceptual framework is shown at Figure 3. The description of the framework begins with the boxes attached to the circle before focusing on the possible resultant community of practice aspects identified inside the circle.

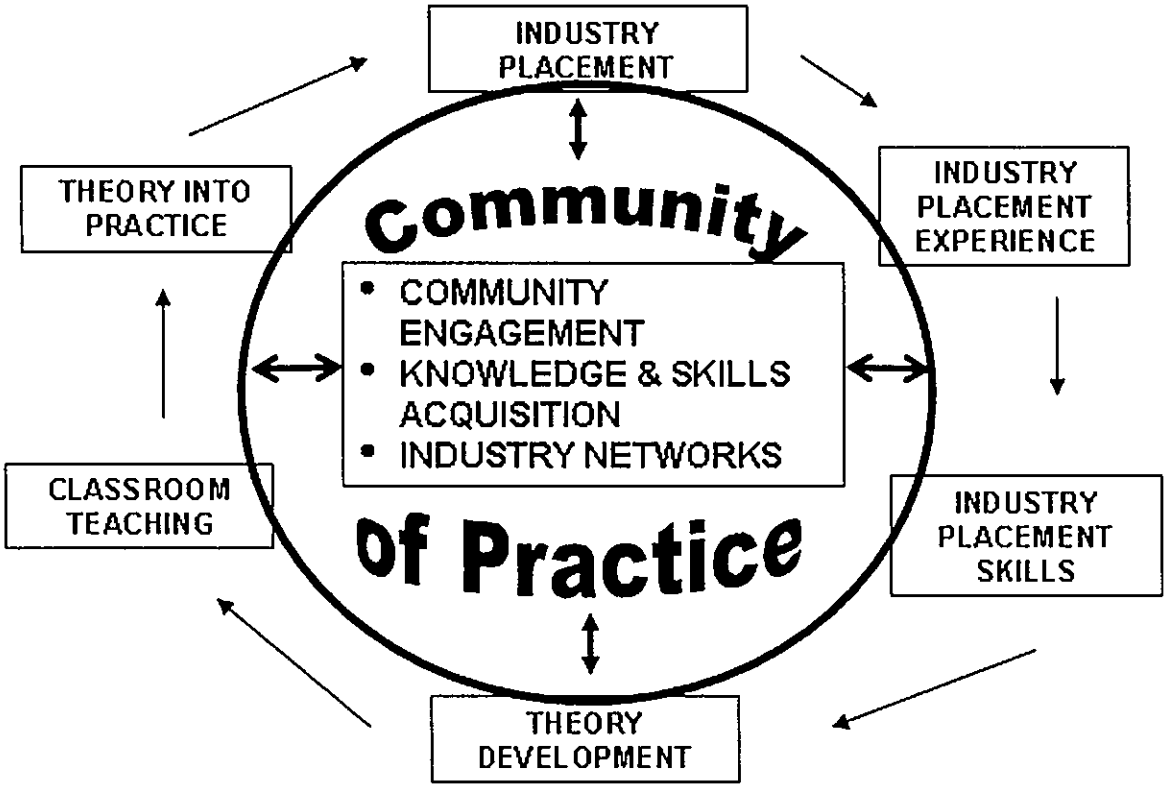


*Figure 3: Teacher Industry Placement: Theory into Practice (Schuller & Bergami, 2008, p. 201)*

- Industry placement. The experience and outcomes of this professional development activity will be influenced by the planning that establishes goals and objectives to provide an understanding of what each party desires, and how these things might be achieved (Bergami & Schuller 2009, Brown and Chalmers 1990). Consequently, the academic and host organisation must enter into a prior agreement setting out the terms and conditions of the placement, including: the period of the placement; the job role; responsibilities; and the expectations of each party (Gela, 2004; Meadon, 1990).
- Industry placement experience. The academic is exposed to the culture and environment of the host organisation, and the industry sector in which it operates. This is an important aspect as it creates an opportunity for the academic to learn about particular industry practices, processes and systems, thereby contextualising learning in practice (Arnold &

Smith, 2003). From this, comes an increased awareness and new knowledge relating to industrial and labour market needs.

- Industry placement skills. Whilst on placement, exposure to industry trends, business systems and processes should enhance the academic's own knowledge and understanding of current business practices. This may support the academic in their teaching and learning practices, through the expanded knowledge and skills repertoire gained during the industry placement (Ireland, 2002).
- Theory Development (from practice). The academic is able to observe industry practices and compare and contrast these with existing business theories. Where the theories and practices match, the theory is validated. Where a difference exists between theory and practice, there may be opportunity to either develop new theories, or modify existing ones. The knowledge gained from these processes should lead to enhanced teaching and learning practices in the classroom (Haigh, 1997).
- Classroom teaching. The academic may enrich their classroom teaching and learning practices through the use of authentic workplace materials from the host organisation. There are also the opportunities to create hypothetical case studies drawn from observations of business practices during the placement, and to extend invitations to industry representatives as guest speakers (Ireland, 2002). Furthermore, the classroom may also be used as forum to test new theories in a simulated practical environment, thereby creating a nexus between theory and practice, and a closer alignment between the curriculum and workplace practices (Brown & Chalmers, 1990; Haigh, 1997; Ireland, 2002; Klein, 2001; McGavin, 1996a).
- Theory into practice. From the industry placement experience, opportunities may exist for the academic to work collaboratively with industry in a partnering arrangement. Through joint research and consultation, new theories and business innovations could first be evaluated within the institutional setting, before being pilot tested in the workplace, by the willing industrial partner. Should the innovation be successful, then the industry partner would presumably reap the benefits of any future full-scale implementation.

As Figure 3 shows, an academic's participation in an industry placement should not be limited to a once-off experience. Ideally, it is a professional development activity that should be conducted periodically, so the academic can maintain currency in industrial processes to enhance teaching and learning practices. The engagement between academics and industry should provide an opportunity for the formation of a Community of Practice (COP). Lave and Wenger (1991), have defined a COP as a group of people who "have different interests, make diverse contributions to activity, and hold varied viewpoints" (p. 98). Lave and Wenger (1 991), also acknowledge that the degree of participation by members of the COP may differ for various reasons, and that the COP does not necessarily comprise a "well defined identifiable group" (p. 98). Nevertheless, the concept of a COP implies participation in "an activity system about which participants share understandings concerning what they are doing and what that means in their lives and their communities" (Lave & Wenger, 1991, p. 98). In the context of the conceptual framework shown in Figure 3, the COP comprises three major elements:

- Community Engagement. This requires the interweaving of professional exchanges between individuals who share information about matters that are important to group members' particular areas of knowledge or expertise (Wenger, 1998; Wenger et al., 2002). Community engagement through an industry placement allows the university to display its

courses, and the quality of its students to the host firm, and the chance to negotiate possible opportunities for student internship programs. The host organisation acquires personal knowledge of student capabilities, and the opportunity to consider individual intemees in their workforce planning initiatives.

- Knowledge and Skills Acquisition. The collective knowledge and skills obtained through industry placement serve multiple purposes. The academic gains access to in situ professional development opportunities that enhance their industry knowledge. This experience can support academic currency and industry relevance in teaching and learning practices, and thereby enrich the student's learning experience. The host organisation may gain from sharing information about its business processes with the academic, acting in the capacity of an independent third party, who may provide additional insights, or challenge existing systems or processes, with a view to improving processes (Ireland, 2002). For the university, there is the potential for closer ties with industry, improved study programs, and a higher calibre of graduates.
- Industry Networks. Teaching and learning does not occur in isolation, but requires the "free flow of information and knowledge [from] a constant stream of many resources" (Mitchell, 2003, p. 70), including the "managing and sustaining innovation across networks, not just within individual enterprises" (Mitchell, 2003, p. 77). The academic has an opportunity to develop ongoing relationships with the host firm and other businesses within that industry, both during and after the industry placement experience — the COP. The COP may encourage the negotiation of meanings between the abstract theories contained in educational texts and business practices. The academic can utilise the COP as a means of keeping abreast of industry trends and innovations. The academic may need to play a central role in the development and continuance of a COP.

The industry placement conceptual framework, shown at Figure 3, was 'tested' through an exploratory study in Malaysia and the findings are discussed in the next section.

**Findings and Discussion**

It should be noted that due to the small sample size (n = 27) only descriptive statistics have been provided.

The gender of respondents, as shown in Table l , is mainly from females and this appears to be consistent with composition of the general academic population in Malaysia where there is "a preponderance of women in teaching" (Aminah, 1998, p. 22).

**Table 1: Gender Composition of Respondents**

| Gender | Frequency | Percent |
|---|---|---|
| Male | 9 | 33.3 |
| Female | 18 | 66.7 |
| Total | 27 | 100.0 |

The age profile and years of teaching experience of the respondents is shown in Table 2. It can be observed that the age profile of respondents shows a young population, with the majority (51.9%) in the 30-49 age group; one person only in the 50-59 age group; and no-one in the 60+ group. All of the respondents are employed full time.

**Table 2: Age and Years of Teaching Experience**

| Age | Frequency | Years of teaching experience | | | | Total |
|---|---|---|---|---|---|---|
| | | 5 years and below | 5+ to 10 yrs | 10+ to 20 yrs | 20+ yrs | |
| 18-29 | Count | 2 | 1 | 0 | 0 | 3 |
| | % of Total | 7.4% | 3.7% | .00/0 | .00/0 | 11.1% |
| 30-39 | Count | 4 | 10 | 0 | O | 14 |
| | % of Total | 14.8% | 37.0% | .00/0 | .00/0 | 51.9% |
| 40-49 | Count | 0 | 3 | 4 | 1 | 8 |
| | % of Total | .0% | 11.1% | 14.8% | 3.7% | 29.6% |
| 50-59 | Count | 0 | 0 | 1 | 1 | 2 |
| | % of Total | .00/0 | .00/0 | 3.7% | 3.7% | 7.4% |
| 60+ | Count | | | 0 | | 0 |
| | % of Total | .0% | 0% | 0% | | |
| Total | Count | 6 | 14 | 5 | 2 | 27 |
| | 0/0 of Total | 22.2% | 51.9% | 18.5% | 7.4% | 100.0% |

The relatively youthful composition of the respondents is reflected in the years of teaching experience, with approximately 74% having 10 years, or less, experience. Of the total respondents, the 30-39 years age group has 37% (n 10) with teaching experience of between 5 and 10 years, and 14.8% (n = 4) with 5 years teaching experience, or less. The teaching experience for 21 out of the 27 respondents has been in the higher education sector, as can be observed from Table 3.

**Table 3: Type of Teaching Experience**

| Type of Teaching Experience | Frequency | Percent |
|---|---|---|
| Within higher education | 21 | 77.8 |
| Outside higher education | 6 | 22.2 |
| Total | 27 | 100.0 |

As can be observed from Table 4, of the six respondents that have other than higher education teaching experience, four cited industry based training, one primary school and the other secondary school. It not possible to make any further comments, however, due to the low number of responses.

**Table 4: Type of Teaching Experience**

| Teaching Experience Outside Higher Education | Frequency |
|---|---|
| Industry training | 4 |
| Primary school | 1 |
| Secondary school | 1 |
| Total | 6 |

In relation to qualifications, it is interesting to note from Table 5, that whilst approximately two thirds of respondents hold Master level qualifications, no respondent has a PhD, however, a number indicated they were pursuing this qualification.

**Table 5: Qualifications of Respondents**

| Qualification | Frequency | Percent |
|---|---|---|
| Degree | 3 | 1 1.1 |
| Masters | 20 | 74. I |
| Not given | 2 | 7.4 |
| Professional qualification | | 3.7 |
| No formal teaching qualification | | 3.7 |
| Total | 27 | 100.0 |

Although not one respondent has ever undertaken an industry placement, there is a generally high level of interest in pursuing such an opportunity, with nearly 70% of positive responses, as shown in Table 6. The data indicates that there is a higher level of interest in the earlier years of the respondents' teaching career. It can be observed from Table 6 that 12 out of 18 respondents with 5 years or less teaching experience expressed an interest in an industry placement. An explanation for this may be that new academics are more prepared to undertake a placement to enhance their skills and knowledge of contemporary industry practices.

In contrast, respondents who have been teaching for more than 10 years do not have a high interest in undertaking an industry placement. An explanation for this may be that because this group has a long-term history of full-time employment in higher education they may lack confidence in their ability to contribute within an industrial setting and feel ill at ease at the prospect of moving outside their academic comfort zone and into an unfamiliar worksite. Re-acclimatisation to a new organisational culture, even if only for a short time, may seem 'risky' to some who have built a reputation as a professional business educator, without ever having really been exposed to business practices in situ. The possible struggles of effectively dealing with the unfamiliar day to day operations in an unfamiliar business setting is not difficult to imagine, nor is the impact this could have on an individual's sense of identity as a 'business' educator.

**Table 6: Interest in and Industry Placement Experience by Years of Service with Current Employer**

| Years with Current Employer | | Interest in an Industry Placement | | Total |
|---|---|---|---|---|
| | | Yes | No | |
| 5 years and under | Count | 12 | 3 | 15 |
| | %0 of Total | 46.20/0 | 11.5% | 57.7% |
| 5+ to 10 yrs | Count | 5 | 2 | 7 |
| | % of Total | 19.2% | 7.7% | 26.9% |
| 10+ to 20 yrs | Count | | 3 | 4 |
| | % of Total | 3.8% | 11.5% | 15.4% |
| Total | Count | 18 | 8 | 26 |
| | %0 of Total | 69.2% | 30.8% | 100.0% |

The high level of interest in pursuing an industry placement shown by new academics is, however, counterbalanced by the barriers that the respondents highlighted, as shown in Figure 4. Of the seven identified categories of barriers, the top three: high workload, no provision for time off/replacement staff; and no encouragement /incentive, account for 75% of identified barriers. It should be noted that not all participants provided answers to this question and, as this was a 'free text' question, some participants provided more than one response.

Lack of institutional support for an industry placement appears to be the main barrier preventing this type of professional development from taking place - this is supported by the fact that only 2 out of 26 responses indicated there was institutional support for this type of activity. No doubt funding issues are one of the primary concerns, as the 'lack of replacement staff' response indicates. If the Malaysian government is serious about providing staff professional development to enhance societal and human capital, it must be willing to fund activities such as industry placements, because "public higher education reflects a commitment by the government to the people of the nation" (Garland, 2009, p. 1 ). The issue will be further discussed later in the paper.

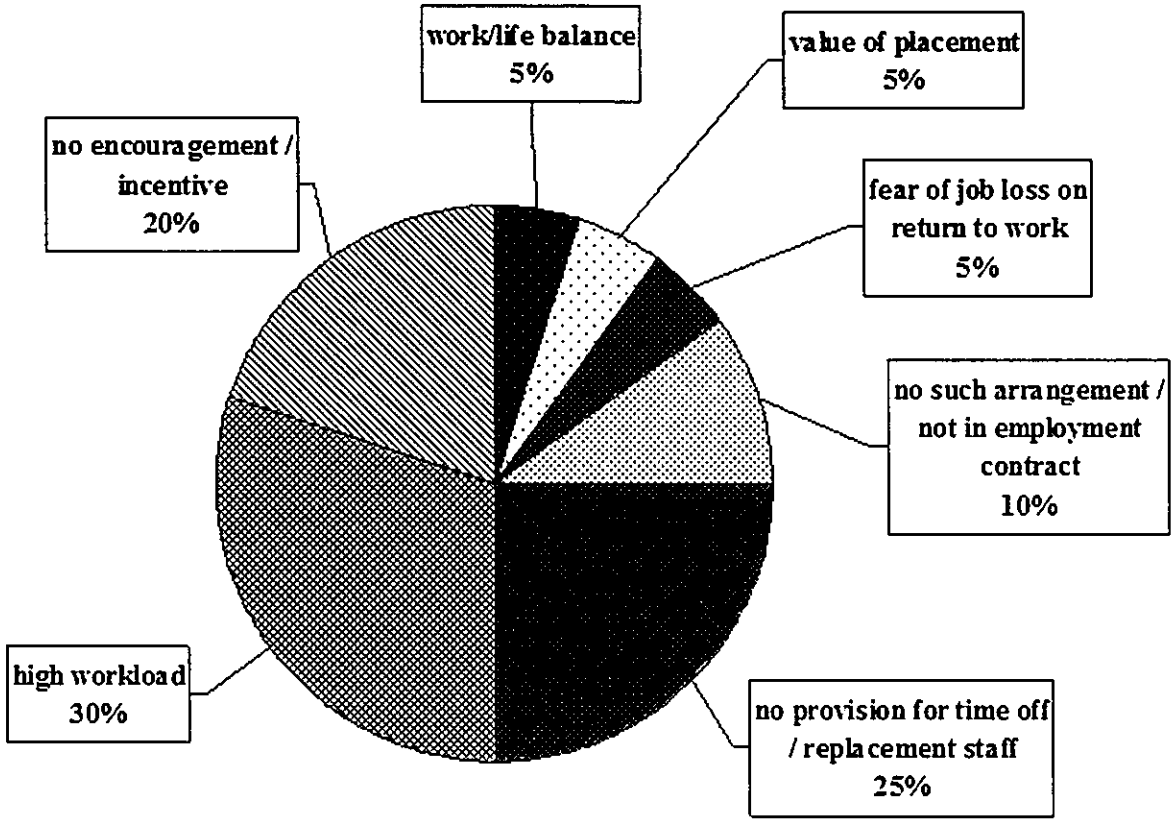


*Figure 4: Barriers to an Industry Placement Experience*

Notwithstanding the barriers identified, respondents cited a number of motivating factors for undertaking an industry placement, that link to the notion of the COP and capacity building. This was a 'free text' question allowing for multiple responses. A total of 88 responses were received. These were categorised and summarised as shown in Table 7.

**Table 7: Motivating Factors for Pursuing an Industry Placement**

| Motivating Factor | Frequency | Percentage |
|---|---|---|
| Gain new experience / professional-personal development | 20 | 22.73% |
| Understand industry | 18 | 20.45% |
| Up-to-date with current industrial practices | 18 | 20.45% |
| Enhancing teaching & learning - linking theory to practice | 10 | 11.36% |
| Location-company background | 6 | 6.82% |
| Networking | 5 | 5.68% |
| Career growth | 5 | 5.68% |
| Break from teaching | 3 | 3.41% |
| Research opportunities | 3 | 3.41% |
| Total | 88 | 100.00% |

The top four motivating factors cited by respondents account for about 75% of the total responses. The three top responses shown in Table 7 support the 'industry placement skills' box of the conceptual framework as well as the 'knowledge and skills acquisition' component of the COP. Enhancing teaching and learning practice — linking theory to practice, the fourth most cited motivating factor, supports the 'theory development', 'classroom teaching' and 'theory into practice boxes of the conceptual framework'. The responses that identified networking, as a motivating factor, were surprising to the authors. The expectation was that this would feature prominently, but, in fact, networking was not identified as an important motivator, ranking only sixth in preference and accounting for less than 6% of responses. However, during the interviews, the development of networks and a community of practice, including industry participation in the classroom, appeared to be more prominent, as the responses below indicate.

> We can contribute new knowledge to the host and also they can get an honest 'outsider opinion. We can share the 'real world' experience with the students, and we can use it also as an example for a case study.
>
> We can provide the theory. We can establish contacts with the outside world. We can network with the company and we can bring their experiences to the classroom.
>
> We can help the host firm to conduct mini projects and provide them theory related to their area of interest. We can provide diverse [different] opinions to their project. We can also share our industry placement experience with the students so they can get industry knowledge from us.

One of the benefits for the students is that we can use this as an opportunity to establish industry contacts and bring industry people as guest speakers to the classroom.

The background of the company was also identified as another issue in the interviews, with one respondent who stated

> The benefits depend on the field the host company is in. It is not easy to get arrangements for an ideal company. The benefits will be if the same company is in the same field as the subjects you are teaching, because I can use this knowledge in the classroom.

It may be argued, from the data in Table 7, and the interview responses, that there is a cross relationship among the four top cited motivators because, after all, if the respondents are full time academics, whatever additional skills and experience they may gain from an industry placement can reasonably be expected to result in an enhancement of teaching and learning practices in the classroom. This argument appears to be supported from the responses in relation to the perception of benefits resulting from an industry placement, as categorised and shown in Figure 5. It should be noted that this was a 'free text' response and a total of 60 responses were received. These responses show that two of the three top cited perceived benefits (accounting for just under half of the total responses) link directly to the classroom environment and the linking of theories to practice. The three top responses show in Figure 5 appear to support all of the elements of the conceptual model, except for networking, however, that features in 6 (or 10%) of responses, as the fifth most identified benefit.

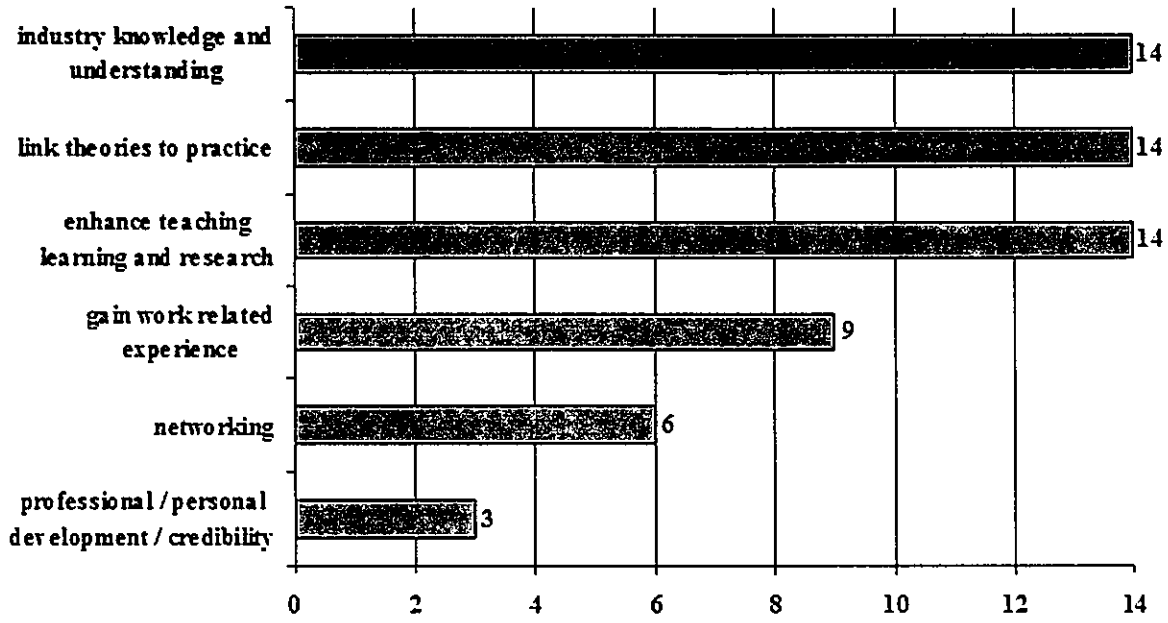


*Figure 5: Industry Placement Experience — Perceived Benefits*

It should be noted that there is some tension among the different aspects of an industry placement experience based on the data discussed so far. The lack of employer support (evidenced from the data at Figure 4) is not easily reconciled with the high overall interest in an industry placement (evidenced by the data in Table 6) and the perceived benefits (evidenced by the data in Figure 5) that correlate with existing literature. It is likely that these tensions are caused by financial pressures and to gain a better understanding of the resource commitment in higher education, it is helpful to consider the preferred placement duration that respondents identified, as shown in Table 8.

**Table 8: Industry Placement Duration Preference**

| Duration | Frequency | Percent |
|---|---|---|
| A full teaching semester release for full time work in industry | 20 | 74.1 |
| A fractional teaching semester release for working in industry one day per week | 1 | 3.7 |
| A one month release for full time work in industry during the teaching period | 1 | 3.7 |
| A one month release for full time work in industry during the non-teaching period | 2 | 7.4 |
| A one week release for full time work in industry during the non-teaching period | 2 | 7.4 |
| Total | 26 | 96.3 |
| Non-response | | 3.7 |
| Total | 27 | 100 |

It can be clearly observed that in nearly two thirds of cases, the preferred placement duration comprises a full teaching semester release for full time work in industry. The longer tenn placements are supported by the literature because "deep learning often proceeds slowly" (Gela, 2004, p. 8) as it takes time to master skills and processes (Lave & Wenger, 1991) and develop "partnership based on bilateral contributions" (Meadon, 1990, p. 28). As one respondent stated during the interview:

> Usually one to two months is very short and it is not attractivefor the host to pass and share knowledge with you. Basically there is not much benefit ifit is a short period of time.

There are significant funding and human resource implications for the educational institution in implementing an industry placement scheme. This would require hiring replacement academics for those on placement and, to maintain quality of teaching, the replacements would need to discipline match the incumbents that are to go on placement. This process may take some time to complete and, additionally, it may be difficult to find replacements for short term contracts for one semester only. However, according to the Malaysian government's latest higher education action plan, 'attachments' are an option for staff development. Perhaps, pursuing the funding for this initiative requires a philosophical shift in the approach to spending on education. Rather than viewing this as an expenditure item in the government's budget, it may be viewed as a long term investment in the society it governs.
Indeed, there are a number of examples of government funded initiatives, such the European Union 's Erasmus project for staff exchange. However, rather than staff exchanges, the focus may be on benefits that can be more readily affiliated to the local community, such as the Australian government's 'Researchers in Business' program. The primary aims of this program are to:

- help break down the cultural divide between business and the research sector; . speed the dissemination of expertise;
- accelerate the adoption of new ideas and technologies; and
- increase competitiveness of firms (Enterprise Connect, 2009).

This scheme was set up in March 2009 with a budget of 10 Million Australian Dollars, recognising that Australia "ranked last in the OECD on collaboration between public sector researchers and industry" (Carr, 2009) and this was costing opportunities and leaving the country "falling further and further behind the rest of the world" (Carr, 2009). This scheme enables small and medium-sized businesses to employ a university researcher on a fifty per cent salary cost basis (up to $ 50000), for up to twelve months. Critically, to qualify for assistance under this scheme, the researcher must spend a significant period of time working on-site within the firm. Such a scheme recognises that universities indeed have the "task of critically transmitting knowledge, bringing together teaching and research in an inseparable union" (Roversi-Monaco, 1998, p. 3). Given the perceived benefits expected by academics, as shown in Figure 5, including the enhancement of research, this scheme should be attractive to the Malaysian academic community.

Therefore, a scheme similar to the Australian Researchers in Business could be considered by the relevant Malaysian government education policy makers as a mechanism to facilitate some

of the commitments expressed in its latest higher education plan that, significantly, include 'attachments', that is, industry placements.

**Conclusion**

The role and purpose of higher education is under continuous change, shaped by economic and political events around the globe. There is a push to provide education that is more practical and, in meeting this requirement, academics themselves need to acquire additional skills and knowledge to bring applied learning to the classroom. This requires the academic to be professionally developed in their area of specialisation. An industry placement may be a suitable option for such development.

The findings of this exploratory research broadly support the theoretical framework provided in Figure 2, although because of the low number of responses, care needs to be exercised in the interpretation of the data.

The 'industry placement' is supported by the data in Table 6, with a 70% level of interest. The 'industry placement experience' and 'industry placement skills' are identified in Table 7 as high motivating factors for pursuing such an activity. The 'theory development' :classroom teaching'; 'theory into practice'; and the 'knowledge and skills acquisition' elements of the COP are cited both as motivating factors (Table 7) and perceived benefits (Table 6). Although the 'community engagement' and 'industry networks' elements of the COP did not feature as highly as expected by the authors, there is, nevertheless, reference to these in the interviews, and these have also been identified as motivators and perceived benefits. Therefore, based on the results from this study, the conceptual framework is considered useful in understanding industry placement schemes and their resultant benefits to the key stakeholders and their community.

The data also highlights that there are barriers to an industry placement occurring, and that these are primarily financial barriers. The ideology of the Malaysian higher education plan perhaps does not correlate well with the overall budgetary situation, and this is likely to be especially so, when difficult economic times prevail. To facilitate the opportunity for professional development and the up-skilling of academics in new areas, the Malaysian government should perhaps consider this expenditure as an investment in the country's long term future rather than an expense item in the current budget.

There is scope for the Malaysian government to consider the introduction of a scheme similar to the Australian Researchers in Business, subject to funding availability, as a means to link academics and industry in meaningful projects.

There are opportunities for further research in the area of industry placements as professional development activities. More studies are warranted to gather additional data for further analysis. There is also scope to widen this research in the future by including the other stakeholders, viz the universities, host firms and the students, so as to get a 'complete picture' of the results and outcomes of an industry placement experience. If possible, it would also be desirable to reproduce similar studies in a number of countries, to more vigorously test the theoretical framework for an industry placement.

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