

# STRATEGIES TO ENHANCE FOREIGN WORKERS SKILLS AT CONSTRUCTION SITE

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## ABSTRACT

*The fragmented and unstable nature of the construction industry associated with unpleasant working milieu caused the diminishing preference of potential manpower to participate in the construction industry. An increasing number of construction firms are experiencing severe outflow of the workforce, not limited to loss of manpower, but contemporaneously, expertise and valuable experiences too. The construction industry is conservative and particularly resistant to synchronise with hectic and rapid changes to content and accommodate current demands. Accumulation of a few causes such as the refusal of locals to involve, unsatisfied working conditions, labour-intensive trades and as like caused workforce paucity as the supplies unable to overcome and cope in-parallel with the demands. The aim of this study is to generate strategies to enhance or improve the skills of the foreign workers. The respondents are mainly the foreign workers at construction sites. The questionnaire focus on the worker's perspective on various parties roles' that might help them to increase their construction skills. From the result gathered, most respondents are interested in incentives in employee training, certification program and better standardised wages, that can help them to further enhance the skill level and subsequently upgrade their living status.*

**Keyword:** *Construction, Foreign Labour, Malaysia, Skill, Strategies,*

## I. INTRODUCTION

### 1.1 Research Background

According to Department of Statistic as of fourth quarter of 2015, there had been a total of 10,000 projects that are being registered. Compared with the third quarter of 2014, which possessed a total number of 9,883 projects, some growth is being portrayed [1]. With the positive incremental in construction industry proportional to the paucity of labour supply, it is becoming a worrisome predicament that cannot be ignored no more. From another report released by the Department of Statistics on 2015, construction industry in Malaysia had employed a workforce of 745,131 workers solely, which comparatively, the ratio of workers consumed to national income is of surprisingly high [1].

Seeing the high demand of manpower and in parallel to satisfy the performance, around 70% - 80% of development works are involved by foreigners. The familiarization and comprehension acquired in correspond with passing time possessed by foreign workers, the influx and adaptation of their kind caused most employers

reluctant to employ locals since the wages paid to foreign workers are much less as compared to the locals [2]. From the initial recruitment of foreign workers until present, we have been alarmed the associated consequences. Over-dependence on foreign workforce will inevitably stimulate an outflow of currency, cause a decline in productivity and performance, and the existence of hurly burly that distorted the economy and social balance of equilibrium [3]. Foreseen these, we were closing an eye and allowed for its occurrence, and currently, we are the one begging for their stay.

The over reliance upon foreign workers put us through hard times, especially with unstoppable and rapid development, the scarcity of them will halt the progress to enhancements. As revealed above, abundance projects available, but whether the supply of workers is able to cope in sync, is yet another query. According to the President of Master Builder Association Malaysia (MBAM), the shortage of skilled construction workers was an exceptionally essential issue in construction industry [4]. The Malaysian construction industry has been experiencing a critical shortage of workforce [5]. Years passed, but still, this very issue still existing, and emerging to even critical stage.

To accomplish Vision 2020, any delay or disturbance should be mitigated and avoided. MBAM stated that, the acute shortage of skilled workers in the construction industry will bring negative impact towards the projects under the Tenth Malaysia Plan (10MP) and Economic Transformation Plan (ETP) [5]. The distortion of normal performance expected will lead us to wrong path and ineluctably, render and inhibit our national growth.

Singapore has 52.8% of skilled workers, meanwhile Malaysia has only 28% of skilled workers. The facts of 25% SPM-leavers enter the workforce without proper skills training / tertiary education, thus limiting their career advancement. The Ministry of Human Resource (MOHR) targeting to increase their workforce to 33% - 40% skilled by 2020 [6].

According to Construction Industry Transformation Plan (CITP), the latest statistics on local construction workforce is 8% Construction Manager and Architects, 9% Site Supervisor, 8% Skilled Construction workers, 22% Administration Personnel and 53% General Workers or Unskilled workers [7]. To opt between, we chose to recruit foreign workers, with the intention of not to compromise nation's outgrowth. An outstanding number of low-skilled foreign workers were imported to induce development; Malaysia had become the Asian country with the most significant reliance on foreign workers [8]. From the entanglements revealed above, there are abundant evidences mention about the unskilled construction workers have overloaded the construction industry. Moreover, time passed and reliance upon foreign workers are thickening, and when the supply of them is diminishing, it puts us on an urging condition, as it will inescapable, disturb and ruin our routine performance. Thus, on this critical stage, if really left untreated, we never will be freed from this extrication, and what's up-comings will be encumbrances and serious impacts that will cost us more.

Thus, the research is carried out to generate strategies to enhance the skills of the foreign workers in a selected local construction projects. Seven construction sites were chosen as the representative for this research is located in Kota Kinabalu, Sabah, Malaysia. The composition of foreign workers is quite unique and different from other state in Malaysia.

## **II. LITERATURE REVIEW**

### **2.1 Malaysian Construction Academy (MCA)**

The Construction Industry Human Resource Development Policy has targeted to ascertain that 60% of registered in general, semiskilled and skilled construction workers have the necessary fulfillment by 2015 [9]. CIDB intends to capitalize local workforce's potentials and possibilities to mitigate reliance on foreign labours and in contemporaneous, to boost the skill level of existing construction workers by offering specialised skills training, in correspondence to the industry's needs [10, 11]. Datuk Rosnah Abdul Shirlin said Construction Industry development Board (CIDB) Malaysia is very concerned with human capital development aspects in advancing to a high-income country [12]. MCA serves as a platform for CIDB in providing skills training for nation's construction workforce [10, 13, 14, 15]. Six MCAs are allocated strategically to cater human resource needs in fulfilling high density construction activities [10, 16, 17]. MCA is shielded under CIDB's Construction Personnel Development Division, obligated to provide skills and management training in construction, assess and evaluate skills, and accredit skilled workers in the construction industry [10, 16, 17].

To ensure that construction workers produced are of high quality and efficient, CIDB encouraging all construction workers with no skill to undergo skills training and Certificate of competence will be issued by CIDB Malaysia in skills recognition [11]. CIDB had determined all construction works that utilize skills have to be executed by skilled workers, thus CIDB had made it mandatory and compulsory that workers have to undergo an accreditation test to verify their competency and skills [10, 11]. MCA's objectives are to: Produce more local skilled and semiskilled construction workers to help reduce the dependency on foreign labour; Provide a more systematic and organized construction skill courses; Produce a productive workforce, aware in the aspects of safety, quality oriented and efficient; Provide opportunities for construction workers to enhance skills' levels; Support the construction industry in achieving competitiveness by producing skilled workers that are able to handle sophisticated construction technology; Develop and pioneer the export of trained professionals to carry out works overseas; and Carry out skills accreditation programme [11, 18].

### **2.2 Industrialised Building System (Ibs)**

Efforts to diminish influx of foreign labour and illegal workers abruptly are very costly, time consuming and many enforcement personnel will be involved. Encouragement on labour saving devices such as IBS application and greater mechanisation and automation approaches to mitigate reliance on foreign labour had been exemplified [19, 20, 21, 22]. The needs for mechanization are to reduce dependency on foreign workers and shortage of a skilled and efficient manpower [23]. The IBS Roadmap 2003 -2010 had been endorsed by the Cabinet to serve as the blueprint document for the industrialisation of construction sector [11, 23, 24] While, the objectives for IBS Roadmap 2011- 2015 are to sustain the existing momentum of 70% IBS content in public sector building projects; and to boost existing IBS content to 50% in private sector building projects by 2015 [11]. The agenda of IBS had been duly highlighted in CIMP 2006-2015 as of its salience to the construction industry [25]. The importance of IBS is also been shed light under the Strategic Thrust 5: Innovate through R&D to adopt a new construction method to outline the future direction of the construction industry [23].

IBS is being eagerly promoted by the Malaysian government to encourage the systematic construction process as its application will overcome the issues of difficult, repetitive part of the building, time consuming and costly labor [25]. It is an approach or process applied to make construction less labour oriented and faster and fulfilling quality concerns [22]. These advantages promoted a safer and more organised construction site, and reduced the completion time of construction [26]. The wider view of IBS is about changing the conventional mindset, enhancing human capital development, developing better cooperation and trust, and encouraging transparency and integrity [22]. Since 2008, IBS had been made compulsory in public building projects, where 70% of components using must be IBS. This was duly highlighted under the Treasury Circular SPP 07/2008 [23, 25]. The IBS Centre established in 2006 is a one-stop centre of IBS related programmes initiated by CIDB, where training and consultancy on IBS and showcase IBS technology are provided. The obligation to implement IBS strategies to improve performance and quality, and reduce the dependency of unskilled foreign labours from flooding the construction market [15, 24, 27]. Majority contractors believed that the IBS system can contribute to better quality building system and mitigation on the dependence on foreign workers [28]. Inevitably, IBS is a less labour-intensive method, but it required skilled labours to perform on-site work such as the installation of IBS components [27]. These skilled-workers need to be imparted training and skill appropriate to IBS as they are much more quality conscious than the unskilled labour. IBS diminished labour shortage issue as the elements are pre-fabricated and eliminated manual works and jobs at the construction site [23]. The findings revealed the mean actual labour productivity for IBS was 2.10 manhours/m<sup>2</sup> while for conventional, the result was 7.00 manhours/m<sup>2</sup>, which indicated that IBS contributed in a reduction of labour usage [29, 30].

Despite well-documented benefits, the root cause of low application was the low labour cost. The barriers lead to refusal of IBS were readiness, cost issues, awareness and knowledge, planning and implementation, negative perception [23, 31]. CIDB had collaborated with MPC in developing an introductory manual for IBS business start-up, specifically for developers, to up-bring basic understanding for new entry developers in embarking their business in IBS [18, 32]. A forum was urged to launch to ease information and experience exchange, new techniques and advice on promotion and IBS implementation. An online portal can be formed to disseminate its international trends, products and associated processes [23, 33].

### III. METHODOLOGY

Initially the leading questions for the questionnaire were developed based on objective of the study. Question of the probable strategies to enhance or improve the skills of the foreign workers was asked. The respondents in this sections were the workers at the selected construction sites. The design questions concentrate on workers perspective on various parties' strategies that might help them raise their construction skills. Distribution of questionnaire survey to selected construction project in Kota Kinabalu. This questionnaire forms were answered by 60 respondents. Respondents from each construction project were consisted of skilled, semi-skilled and general foreign workers. Method of data analysis are using Mean Index Method by using the formula (1) below.

$$\text{Mean Index (MI) formula: } \sum a_i x_i / \sum x_i \quad (1)$$

Where,  $a_i$  : Index of a class;  $x_i$  : Frequency of response;  $I$  : 1, 2, 3, 4 and 5.

The mean index (MI) of the variables was later analyzed and categorized according to the following classification:

- 1 = Strongly Disagree ( $1.0 \leq MI < 1.5$ )
- 2 = Disagree ( $1.5 \leq MI < 2.5$ )
- 3 = Slightly Agree ( $2.5 \leq MI < 3.5$ )
- 4 = Agree ( $3.5 \leq MI < 4.5$ )
- 5 = Strongly Agree ( $4.5 \leq MI \leq 5.0$ )

#### IV. RESULTS AND DISCUSSION

##### 4.1 Government Agency Strategies

Fig. 1 show the tabulated bar chart of the mean/average index on strategies taken by government agency to overcome lack of skills of labour start from item strategies no 1 until strategies no 6 as shown in Table 1. From the chart describing that the highest index is subjected towards item strategy item no.6 which is provide incentive to involve in training with the average mean index is 5. Whereas the smallest mean index is reflected on strategy by introduce certificates for specific skills job that is 2.1 averages/ means index.

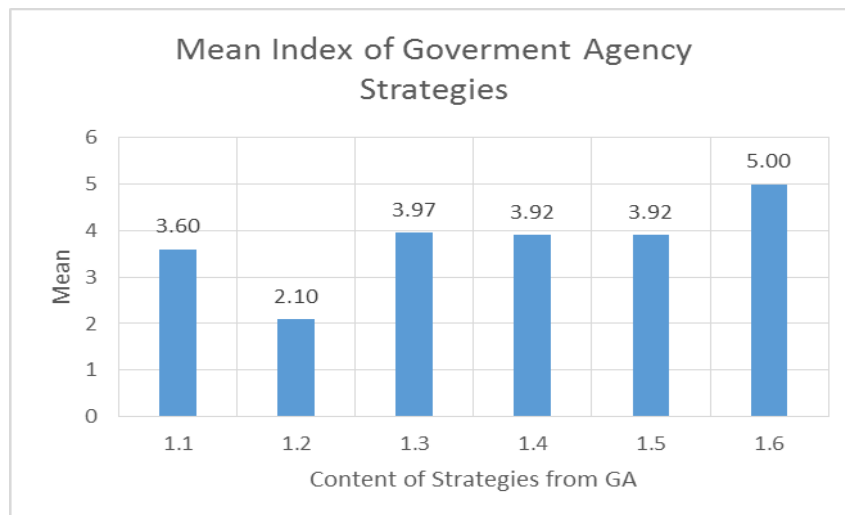


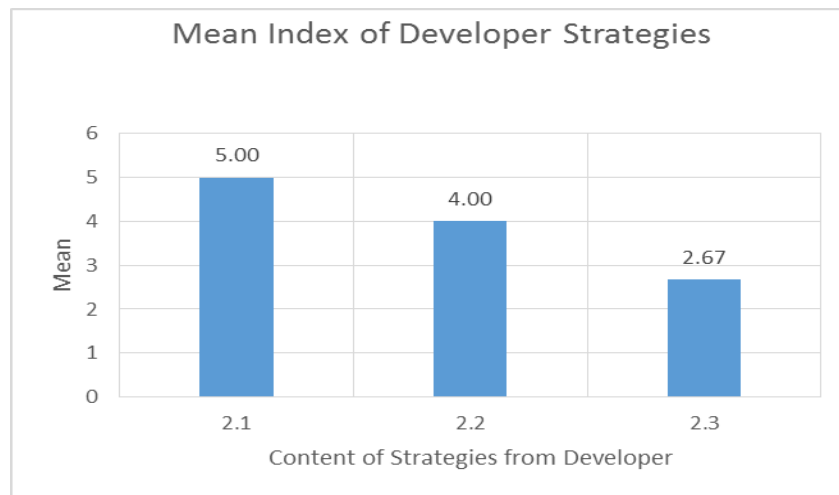
Figure 1: Mean index of Government Agency Strategies

Table 1: Description for Item 1.1 To 1.6

Item	Description
1.1	Requiring workers have licenses
1.2	Requiring certificates for specific skills on job
1.3	Establish a training center skills for foreign workers
1.4	Categorizing and limit consumption of foreign workers according to their skills
1.5	Provide permanent residents(PR) to foreign employees with skilled & quality
1.6	Provide incentives to all involved in employee training

### 4.2 Developer Strategies

Fig. 2 show the tabulated bar chart of the mean/average index on strategies taken by developer to overcome lack of skills of labour start from item strategies no 1 until strategies no 3 as shown in Table 2. From the chart describing that the highest index is subjected towards item strategy item no.1 which is rewards the contractor with the average mean index is 5. Whereas the smallest mean index is reflected on strategy by introduce the system of quality management that is 2.67 averages/ means index.



**Figure 2: Mean index of Developer Strategies**

**Table 2: Description for item 2.1 to 2.3**

Item	Description
2.1	Reward contractor for the project done quickly and good quality
2.2	Provide training to all employees involved with the current project
2.3	Require the system of quality management (ISO 9000, QLLASIC (Malaysian Quality Assessment System in Construction))

### 4.3 Contractors Strategies

Fig. 3 show the tabulated bar chart of the mean/average index on strategies taken by contractors to overcome lack of skills of labour start from item strategies no 3.1 until strategies no 3.5 as shown in Table 3. From the chart describing that the highest index is subjected towards item strategy item no.5 which is helping workers to get skills/knowledge with the average mean index is 4.52. Whereas the smallest mean index is reflected on strategy is led by experience employees that is 3.91 averages/ means index.

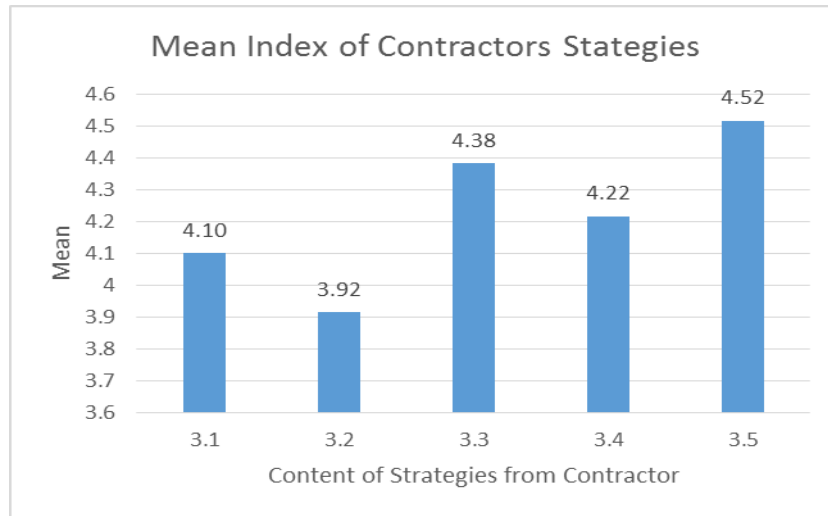


Figure 3: Mean index of Contractors Strategies

Table 3: Description for item 3.1 to 3.5

Item	Description
3.1	Provide training for new employees
3.2	Lead by experience employees
3.3	To obtain skilled workers from reliable agencies
3.4	Encourage workers to participate in construction seminar
3.5	Helping workers to get machinery licenses or skills certificate

#### 4.4 Trade Union Strategies

Fig. 4 show the tabulated bar chart of the mean/average index on strategies taken by trade union to overcome lack of skills of labour start from item strategies no 4.1 until strategies no 4.3 as shown in Table 4. From the chart describing that the highest index is subjected towards item strategy item no.3 which is standardize wages with the average mean index is 4.9. Whereas the smallest mean index is reflected on strategy is signing contract with oversee construction school that is 3.83 averages/ means index.

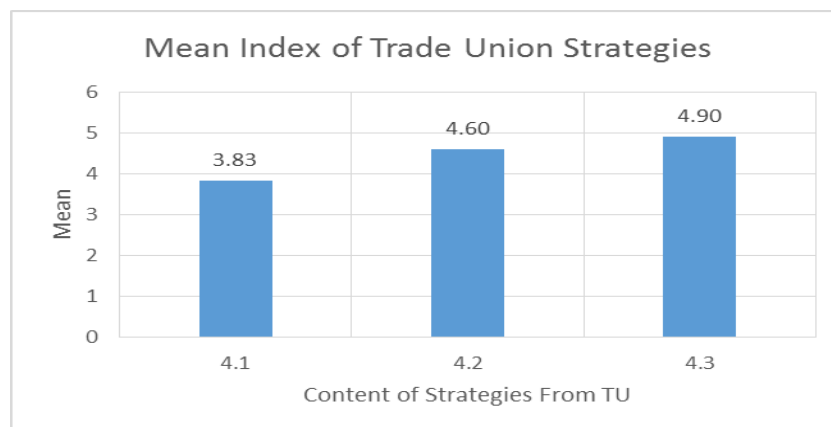


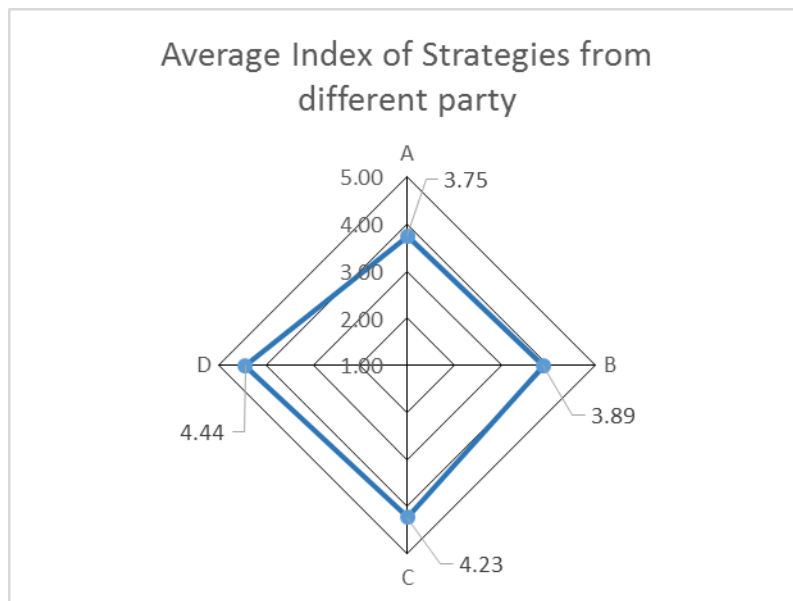
Figure 4: Mean index of Trade Union Strategies

**Table 4: Description for item 4.1 to 4.3**

Item	Description
4.1	Sign a contract with overseas construction school
4.2	Provide basic training such as skills/knowledge for workers
4.3	Standardize wages according to skills level and current rate

**4.5 Average index of strategies from different party**

Fig. 5 show the radar chart for every mean index of four different type of party’s strategies from A (government agency), B (developer), C (contractor) and D (trade union). From the chart describing that the highest index is subjected towards Item D which is trade union with the average mean index is 4.44. Whereas the smallest mean index is reflected on government agency that is 3.75 mean index.



**Figure 5: Average index of strategies from different party**

**V. CONCLUSION**

This questionnaire carried out in this study helps to achieve the objectives of strategies that can improve foreign workers skills. The strategies of improving skills will be carried by four different party, there are government agency, developer, contractor, and trade union as follows:

**5.1 Government agency**

As in the collected data, ‘Provide incentives to all involved in employee training’ was been recorded as the most favourite strategies amongst others in motivate them to improve their skills. Frankly, better benefits offered and tempting salary always the most sought after by majority, as people always hard to resist the allurements to better milieu and competitive wages, to further enhance the living status and to adapt themselves well with the increasing living cost. Same idea came to ‘requiring certificates for specific skills on job’, the respondents rated



the lowest agreement on this section. It is because if this is a compulsory, this might restrain the workers to work on every trades on the construction. This will highly affect their wages at the end of the month.

### **5.2 Developer**

As delineated in the collected data, ‘reward contractor for the project done quickly and good quality’ has the highest rate of agreement, and ‘require the system of quality management’ has the lowest rate of agreement. This has the same case as government agency. Construction workers (respondents) wanted to have a better quality of life. Therefore, they will increase their skills level in order to get a better wages.

### **5.3 Contractors**

In the collected data, ‘encourage workers to participate in construction seminar’ has the highest rate of agreement. Respondents think that, contractors or their company should pay for them to join seminar to help them improve their skills level.

### **5.4 Trade Union**

‘Standardize wages according to skills level and current rate’ was rate the highest for this section in the collected data. Basically, almost all of the respondents think that they will increase their skills level, if they understand the standardize wages rate.

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