

Existence or Extinction of HRD Needs Assessment: A Case of Malaysian Manufacturing Firms

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Abstract: This study aims to investigate the extent to which participating organisations have carried out needs analysis in accordance with their objectives and projected growth. The four areas that will be examined include: the proportions of organisations that have performed HRD needs analysis and the frequencies at which these needs analyses were conducted; approaches used in identifying HRD needs; the levels in needs analysis and methods used in analysing HRD needs. A combination of quantitative and qualitative research methods was employed. Survey data was obtained from 365 HRD practitioners and supplemented with interview results from 36 HRD practitioners in manufacturing firms in Malaysia. Training needs assessments in the manufacturing firms are found to be generally performed informally through observations. Size of firms had an effect on the way training needs is being assessed and analysed. The absence of needs assessment and analysis is due to lack of expertise and it is irrespective of the size of firms. The results of this study were obtained from HRD practitioners perspective. Caution is advised when generalizing the results as the employees' stance was not obtained. This study contributes to HRD practice in several ways. First, it conforms that HRD practitioners do recognize the importance and power of effective needs assessments in helping them plan and strategize for effective HRD activities. Second, it observes a lack of effective resources to help HRD practitioners in conducting needs assessment. Most of the studies on HRD and training are researched in Western countries. Limited empirical evidence can be obtained in Malaysia, particularly from the manufacturing industry. This study presents a comprehensive empirical survey and interviews on HRD needs and assessment in manufacturing firms in Malaysia.

Key words: HRD, training, needs assessments, manufacturing firms, organization, Malaysia

INTRODUCTION

Today, more and more companies are interested in intangible assets and human capital as a way to gain competitive advantage. Training and development can help in supporting company's competitiveness by increasing the company's value through contributing to its intangible assets. However, in designing effective training and development programs and activities, the first step in the instructional design process is the most crucial process in which it has to be properly and correctly conducted. Indeed, improperly and incorrect training needs assessments can lead to disastrous effects.

In Malaysia, the Government has emphasized on the importance of training and development for employees in the manufacturing sector through various initiatives. For example in 2007, the government through the HRD Council provided about 45 million ringgit of monetary assistance to the manufacturing sector for employees' training. About >1,186 training institutions were also established to support the manufacturing

sector other than the introduction and implementation of the HRD Act, 1992. This is because the government believes that investment in human capital is the key to the success of the country's economic growth (Malaysia, Ministry of Human Resources, 2008). Hence, with these support from the government and legislations in place, a systematic approach to human resource development is pertinent towards the success of HRD interventions.

A systematic approach to HRD should begin by identifying the organisation's business objectives or strategy. Hence, needs assessment and analysis is recognised as the first step in any HRD intervention (Leigh *et al.*, 2000). This study aims to investigate the extent to which participating organisations have carried out needs analysis in accordance with their objectives and projected growth.

The four areas that will be examined include: First, the proportions of organisations that have performed HRD needs analysis and the frequencies at which these needs analyses were conducted; second, approaches

used in identifying HRD needs; third, the levels in needs analysis and fourth, methods used in analysing HRD needs.

Training needs assessments and analysis: Leigh *et al.* (2000) stressed the importance of assessing and analysing needs because this stage builds the foundation by identifying the kinds of HRD intervention needed for an effective effort. However, Desimone *et al.* (2002) contested that in analysing HRD needs, four levels of needs has to be analysed.

They include assessing the needs of the organisation, individual employees' skills, knowledge and attitudes and their functional responsibilities as well as departments' needs (Wilson, 1999; Harrison, 2000). This proposition is argued by Kerr and McDougall (1999) that most companies do not analysed all the four levels but rather emphasised on individual employees' needs. Turning to the methods used in accomplishing the identification of needs within organisation. Wilson (1999) suggested the conventional and simpler methods such as interviews, questionnaires, observations and focus groups to gather information for HRD needs analysis. On the contrary, Gilley *et al.* (2002) suggested the more analytical method such as is/should analysis, critical analysis and root-cause analysis methods to gather information.

However, Reid and Barrington (1994) argued that methods of identification depend on the focus of investigation and have proposed referencing to strategic planning documents relating to marketing, production and staffing; analysing minutes of management meetings and analysing operational and personal records.

Indeed, Wilson (1999) has agreed that it is important to include the HR plan and the organisation's strategic plan in needs analysis. Certainly, it was suggested by several theorists the various methods of identifying needs analysis from the simpler methods suggested by Wilson (1999) to the more technical and complicated method by Gilley *et al.* (2002). However, researchers have argued that organisations would rather much preferred methods such as performance appraisals, informal feedback from line managers and individual employees (Tregaskis and Brewster, 1998; Madsen and Larsen, 1998; Baalen and Hoogendoorn, 1998; Kjellberg *et al.*, 1998; Heraty and Morley, 2000; Elbadri, 2001; Morrow, 2001). Particularly in organisations adopting the ISO policy, Vinten (2000) claimed that employees' training needs through line managers requests are highly associated with non-conformance that is identified upon completion of the ISO auditing procedure. Even though, it was deliberated by theorists and researchers on the importance of analysing needs, it was implied that many companies

do not regard performing HRD needs analysis as a priority (Anderson, 1994; Smith, 1999; Bhatta, 2002; Budhwar *et al.*, 2002) and this phenomenon is particularly obvious in small firms (Sadler-Smith and Badger, 1998; Kerr and McDougall, 1999; Vinten, 2000; Hill and Stewart, 2000; Sadler-Smith and Lean, 2004). Indeed, there are various reasons why needs assessment is not conducted as it is described as being a difficult process, time consuming and lack of resources in carrying out the tasks (Anderson, 1994; Sadler-Smith and Badger, 1998; Madsen and Larsen, 1998; Smith, 1999; Heraty and Morley, 2000; Elbadri, 2001; Budhwar *et al.*, 2002; Hansen, 2003; Hill and Stewart, 2000; Hill, 2004).

On the other hand, Desimone *et al.* (2002) argued that incorrect assumptions are usually made about needs analysis being unnecessary because the available information already specifies what an organisation's needs are. Furthermore, it was contested that there is a lack of support for needs assessments as HRD professionals are unable to convince top management of its necessity (Reid and Barrington, 1994; Wilson, 1999; McGoldrick *et al.*, 2002). This view is criticised by Smith (1999) because most companies do not employ qualified HRD professionals or trainers to manage their HRD functions, despite the fact that performing the complex task of analysing needs can be difficult.

MATERIALS AND METHODS

Data for this study was collected from manufacturing firms in Malaysia, listed in the Federation of Malaysian Manufacturers Directory. Questionnaires were distributed to 2,350 firms and 365 questionnaires were returned (16% response rate). The respondents were key executives responsible for employees T and D function in the participating companies.

The data and information were collected using a structured written questionnaire. It consists of questions: Have performed HRD needs assessments; the frequencies at which these needs assessments were conducted; approaches used in identifying HRD needs; the levels of needs assessments; and methods used in assessing HRD needs. Data from questionnaire survey was analysed descriptively to identify the difference of responses in the Large-Scale Industries (LSIs) and Small-Medium Industries (SMIs). Interviews were also performed with HRD practitioners in 36 randomly selected firms. Interview data was analysed and then categorized into themes and categories to supplement quantitative survey findings. The use of quantitative and qualitative research methods is to strengthen the validity of data and to corroborate survey findings (Creswell and Miller, 2000; Creswell, 2003).

RESULTS AND DISCUSSION

Provision and frequencies of needs assessments and analysis: The HRD practitioners in the participating companies were questioned as to whether they had ever conducted HRD needs assessments and analysis in their organisations. The results of the analysis suggest that a majority (92%) of the LSIs had their HRD needs assessed and analysed of which 74.3% of these organisations performed such assessment and analysis at least once a year. On the other hand, >60% of the SMIs had their HRD needs assessed and analysed but only 39.4% of these companies conducted annual needs assessment. The remaining companies in both the LSIs and SMIs had their HRD needs assessed once every 2-3 years or even on an ad-hoc basis (5.9% in the LSIs and 18.4 in the SMIs).

Indeed, about a third (38%) of the SMIs reported that they had never had any needs assessment whilst only a small number (7.9%) of the LSIs reported the same. Hence, further statistical test showed that there is significant difference between the LSIs and SMIs in their needs analysis ($\chi^2 = 40.48$, $p = 0.000$) and the frequencies at which it is assessed ($\chi^2 = 78.82$, $p = 0.000$).

Therefore, it could be implied that many companies, particularly the SMIs do not regard performing needs analysis as a priority. And this proposition was also shared by researchers of HRD in the small and medium industries (Sadler-Smith and Badger, 1998; Kerr and McDougall, 1999; Vinten, 2000; Hill and Stewart, 2000). For on the basis that most manufacturing companies in Malaysia were not systematic in analysing their HRD needs, it could be construed that employees were not provided with the necessary and appropriate training and development efforts and the training provided was on an ad-hoc basis.

However, studies have also shown that many organisations do not perform needs analysis as frequently as they should (Anderson, 1994; Sadler-Smith and Badger, 1998; Smith, 1999; Bhatta, 2002; Budhwar *et al.*, 2002) and in such circumstances, it would be difficult to envisage how HRD can make a strategic contribution to effective organisational goals (Table 1).

Strategic approaches in identifying hrd needs: Given that quite a large proportion of the manufacturing companies surveyed performed some kind of needs analysis in their organisations, it is pertinent to examine the various approaches that HRD practitioners deployed in identifying their HRD needs. The five approaches in needs identification include, examining top management and senior managers' opinions and perceptions on the

Table 1: Frequency distribution on the provision and frequencies of HRD needs analysis

Parameters	Organisation size			
	SMI		LSI	
	N	Percentage	N	Percentage
Performed HRD needs analysis				
Yes	132	62.0	140	92.1
No	81	38.0	12	7.9
Total	213	100.0	152	100.0
Review frequencies				
Once a year	84	39.4	113	74.3
Every 2 years	9	4.2	6	3.9
Every 3 years	-	-	12	7.9
Ad-hoc	39	18.3	9	5.9
Total	132	62.0	140	92.1

organisations future direction; taking into account employees opinions and perceptions of the organisation; examining top management strategic directions, goals, objectives and financial situation; examining the business processes and changes in the organisation and taking into consideration internal and external business needs and challenges. When an HRD practitioner takes into account all five approaches in identifying their HRD needs, the organisation can be viewed as having a strategic approach in its needs identification.

The results of the analysis showed that a majority of the HRD practitioners agreed there was an examination of the business processes and changes in the organisation and examination of internal and external business needs and challenges in both the LSIs and SMIs in their needs identification (mean ranging from 3.57-4.24, shown in Table 2).

On the other hand, it appears that examination of top management opinions on the organisation and taking into account employees' opinions of the organisation was not typical according to HRD practitioners in both organisation sizes (mean ranging from 1.54-2.32). However, >60% of HRD practitioners in the LSIs agreed that there was an examination of top management strategies and the financial situation though the situation was different in the SMIs. Evidently as shown in Table 2, the overall significant difference testing for organisation sizes indicated that the approach employed by the SMIs is significantly different than the LSIs ($p = 0.000$).

Generally, the above analysis suggests that the approach employed by practitioners in identifying their HRD needs are mainly an examination and assessments of the business processes, changes and also the overall business needs as and when required for the business environment. Indeed, this amplifies literature that identifying human resources' HRD needs are at least in part strategic (Anderson, 1994; Garavan, 1995; Horwitz, 1999).

Table 2: Means comparison, frequency distribution and independent sample t-test for strategic approaches in identifying HRD needs

Parameters	Organisation size							
	SMI			LSI			t-test	
	Mean	SD	Percentage	Mean	SD	Percentage	t-value	p-value
Examine top management opinions on the organisation	1.92	0.624	-	2.32	0.776	9.9	-5.456	0.000
Take into account employees' opinions of the organisation	1.54	0.625	-	1.81	0.761	3.9	-3.639	0.000
Examine top management strategies and financial situation	1.94	0.604	-	3.74	1.120	62.5	-17.761	0.000
Examine business processes and changes in the organisation	3.59	1.250	66.7	4.24	0.746	88.2	-6.203	0.000
Examine internal and external business needs and challenges	3.57	1.340	70.0	4.16	0.767	87.5	-5.347	0.000

Table 3: Frequency distribution and Chi-square test of independence for levels of needs identification

Parameters	Organisation size				Chi-square test	
	SMI		LSI			
	N	(%)	N	(%)	χ^2	p-value
Organisation's overall performance	13	6.1	41	27.0	29.020	0.000*
Departmental requirement and performance	30	14.1	36	23.7	4.890	0.027**
Employee's skills, knowledge and attitudes	69	32.4	43	28.3	.523	0.470
Employees' job functions and responsibilities	17	8.0	33	21.7	13.010	0.000*

*Significant at 0.001 level; **Significant at 0.05 level

Levels of needs identification: Needs analysis is viewed as a process in which the HRD needs of both the employees and the organisations are identified in order to address the gap between employees' abilities and performance and the organisation's requirements. Hence, the four levels of identification, namely; organisations overall performance, the departments requirements, individual employees skills, knowledge and attitudes and also employees' jobs and functionalities were examined.

As indicated in Table 3, it was observed that >20% of the LSIs analysed all four levels of needs identification whereas the SMIs are only likely to analyse their employees' skills, knowledge and attitudes (32.4%). As such, the Chi-square test showed that the levels of needs identification are significantly different between the LSIs and the SMIs at the organisational level ($\chi^2 = 29.02$, $p = 0.000$, $p < 0.001$), department level ($\chi^2 = 4.89$, $p = 0.027$, $p < 0.05$) and job functionalities ($\chi^2 = 13.01$, $p = 0.000$, $p < 0.001$) level but it is not significant at the individual employee level ($\chi^2 = 0.523$, $p = 0.470$, $p > 0.05$). This finding is further supported by quotations from managers interviewed from both the LSIs and SMIs. For instance as cited:

I can say that researcher usually examine the organisation and the department's requirements against the employees abilities in their current jobs and also their attitudes (Training Programme Manager; Electrical and Electronics, LSI)

Table 4: Matrix of factor loadings for HRD needs identification methods

Methods	Component	
	1	2
Formal		
Special training committee	0.891	-
Technical report	0.831	-
Questionnaire survey	0.669	-
Performance appraisals report	0.550	-
Individual job description	0.521	-
Informal		
Personal interviews	-	0.683
Direct observation	-	0.561
Production report	-	0.416
Head of department's report	-	0.378
Eigenvalue	2.470	1.490
Percentage cumulative variance	26.720	43.950

KMO = 0.609; Bartlett's test of Sphericity = $\chi^2 = 694.938$, $df = 36$, $p = 0.000$; Extraction method: Principal component analysis; Rotation method: Varimax with Kaiser normalization; Rotation converged in 3 iterations

what researcher normally look at are the employees current skills, knowledge and attitudes and sometimes we also acknowledge the department's requests (Training Executive, Chemicals and Petroleum, SMI)

Therefore, the above findings suggest that the larger industries had some kind of commitment to analyse all four levels of needs and take into consideration the overall requirements of the organisation and employees. On the other hand, the SMIs were mainly concerned with analysing the individual employees' present abilities, knowledge, skill and attitudes and writers such as Kerr and McDougall (1999) have agreed on this finding.

Methods used in identifying HRD needs: Various methods have been suggested to accomplish the identification of employees' HRD needs within an organisation. However, Reid and Barrington (1994) argued that methods of identification depend on the focus of investigation. In this study, the various methods used in identifying HRD needs were grouped into formal and informal methods of needs identification (Table 4). This was to simplify the interpretation of the various needs identification methods. As in the previous study, principal component analysis was deployed and the results revealed that two factors extracted explained a total of

43.95% of the variance. Factor 1 comprised of special training committees, technical reports, performance appraisal reports, individual employee job descriptions and questionnaire surveys hence, this factor was labelled formal methods of identifying HRD needs. Factor 2 was comprised of the 'informal methods of needs identification such as personal interviews with the individuals, direct observation, Heads of Departments (HODs) or line managers' reports and production reports.

Informal and formal methods: It was shown in Table 5 that the informal methods such as direct observation and personal interviews with individual employees were frequently utilised by the HRD practitioners in identifying employees' HRD needs. Moreover, analysing the production and Heads of Departments' (HODs) or line managers' reports were described as less frequently used, indicated by 10.5 and 8.1%, respectively. To show the two frequently used of informal methods in identifying HRD needs, the following quotes from interviews with managers in the manufacturing companies can be used:

The employees' training needs can easily be analysed through observation by the immediate supervisor or head of department. They are easily identified through their ability, skills and knowledge when on the job. The immediate supervisor hence advises us of the employees' training and development requirements (HR and Administration Manager; Chemicals and Petroleum; SMI)

In actual fact, the personal interview is just an informal conversation researcher have with selected employees on what they think could be done to improve their job functions such as job processes and types of training programme which their job or department would benefit from. From this interview, usually with a few employees, researcher make a conclusion about the types of training programmes for this particular department (HR Manager; Concrete and Cement Industry; LSI).

Therefore, the above findings suggest that both the SMIs and the LSIs are more comfortable with personal observation and conversation with employees on their HRD needs (primary information) rather than secondary information to identify HRD needs. The more formal methods (Factor 2) of information gathering, such as questionnaire surveys (18.4%), assessing performance appraisal reports (18.4%) and other more complicated and technically specialised methods (some 4.7%) such as technical reports, job descriptions and special training committee were less preferred. Indeed, the literature has

Table 5: Frequency distribution for formal and informal methods of needs identification

Methods	Organisation size					
	SMI (N = 213)		LSI (N = 152)		Total	
	N	%	N	%	N	%
Formal						
Special training committee	-	-	5	3.3	5	3.3
Technical analysis	3	14.0	5	3.3	8	17.3
Questionnaire survey	27	12.7	41	27.0	68	39.7
Performance appraisal report	-	-	28	18.4	28	18.4
Analysing individuals job description	-	-	8	5.3	8	5.3
Informal						
Personal interviews with individuals	-	-	30	19.7	30	19.7
Direct observation and feedback	61	28.6	44	28.9	105	57.5
Production report	-	-	16	10.5	16	10.5
Heads of department or line manager's report	6	2.8	8	5.3	14	8.1

indicated that the methods used in defining and analysing HRD needs are wide ranging, from the more formal methods such as critical analysis and root-cause analysis (Gilley *et al.*, 2002) to the informal methods such as requests from lines managers for personnel with a particular skill (Budhwar *et al.*, 2002). But in this study, the more complicated formal methods were unlikely to be utilised by the HRD practitioners in the manufacturing companies. The more informal and easily utilised methods such as direct observation and personal interviews with individual employees were highly deployed.

In addition, this may even include individual employee as well as heads of departments requests regarding specific training needs which were sometimes considered by employers if they were relevant to the needs of the individual employee and the department. In this context, requests for training from line managers were usually associated with non-conformance as identified through the ISO auditing procedure (Vinten, 2000). Generally, the LSIs appeared to be more varied in the methods they used to identify HRD needs whilst the SMIs were mainly dependent on direct observation and some 12.7% performed questionnaire surveys. The SMIs were content to use informal methods of analysis whilst the LSIs were at least sometimes formal in identifying their HRD needs. Indeed other studies has suggested that the performance appraisal is frequently utilised in analysing HRD needs in the LSIs (Tregaskis and Dany, 1996; Tregaskis and Brewster, 1998; Heraty and Morley, 2000; Elbadri, 2001; Morrow, 2001) which is in contrast with the finding in this study. However, the informal method by means of feedback from line managers and individual employees in the SMIs has been endorsed by other

similar studies (Sadler-Smith and Badger, 1998; Hill and Stewart, 2000; Sadler-Smith and Lean, 2004; Vinten, 2000).

Nevertheless, open-ended responses and interview data complement the statistical data on the various factors inhibiting needs analysis. Among the most common comments by HRD practitioners were the lack of financial and manpower resources, in addition to lack of skills and knowledge needed to conduct a systematic needs analysis. A large proportion of organisations did not perform HRD needs analysis as frequently or as thoroughly as they should because of difficulties in the needs analysis process, lack of resources and the time-consuming nature of the activity. For instance, managers interviewed quoted the following:

Needs analysis is a good way to identify workers' training requirements but we do not have the a proper person in charge of training as you know, I am in charge of the overall HR function and it is difficult for me to concentrate on training as I have to concentrate more on other HR matters (HR and Administration Manager; Ceramics; LSI)

Training needs analysis is not important first, researcher do not have the personnel who know how to conduct the needs analysis and secondly, getting an external consultant to conduct the needs analysis is very expensive >RM50,000 per project (HR and Administration Manager; Concrete and Cement; SMI)

CONCLUSION

The above finding defines that the absence of needs assessment and analysis is due to lack of expertise and it is irrespective of the size of firms. Indeed, this finding has been endorsed by other studies (Anderson, 1994; Sadler-Smith and Badger, 1998; Heraty and Morley, 2000; Elbadri, 2001; Budhwar *et al.*, 2002; Hansen, 2003; Hill and Stewart, 2000; Hill, 2004). On the other hand, Smith (1999) raises the criticism that most companies do not employ qualified HRD professionals to manage their HRD functions, despite the fact that performing the complex task of analysing HRD needs can be difficult. Other inhibiting factors mentioned by the organisations sampled include high employee turnover, the absence of a clear HRD plan and policy and the absence of a separate unit or section to handle employees training and development. Therefore on the above basis, a combination of these inhibiting factors can have the effect of driving organisations to view HRD as a burden and this may cause organisations to carry out HRD needs analysis only when immediate needs arise. Hence, this may

suggests manufacturing companies in Malaysia often forsaken the medium and long-term HRD needs and objectives. This study contributes to HR practice in several ways. First, it conforms that HRD practitioners do recognize the importance and power of effective needs assessments in helping them plan and strategize for effective HRD activities. Second, it observes a lack of effective resources to help HRD practitioners in conducting needs assessment. Most of the studies on HRD and training are researched in Western countries. Limited empirical evidence can be obtained in Malaysia, particularly from the manufacturing industry. This study presents a comprehensive empirical survey and interviews on HR training needs and assessment in manufacturing firms in Malaysia. The results of this study were obtained from HRD practitioners' perspective. Caution is advised when generalizing the results as the employees' stance was not obtained. Hence, it is suggested that a research to include the employees' stances is recommended. Moreover, a research to include other industries or sector is suggested in order to generalize the nature of needs assessment and analysis for employees' training, learning and development in organizations.

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