

Training Needs Analysis : Practices of Top Companies in Malaysia

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Rapid changes in today's business environment and intense global competition have made it essential for organizations to constantly train their human resources. In order to design training programmes which are strategic to business needs, training needs must be identified systematically and theoretically with the use of the appropriate tools. A questionnaire survey involving the top 1000 companies in Malaysia was conducted to identify the methods and techniques used to determine training needs and overall perceptions regarding their practices. This paper presents findings of the study and discusses how they agreed and / or differed with training theories as well as results of previous studies. (104 words)

Field of Research: Human Resource Development

1. Introduction

Economic globalization, increasing consumer demand for better quality products or services, explosions in technological advances and constant changes in the business environment have created the need for organizations to continuously provide their employees with certain skills, knowledge and abilities (SKAs) in order to maintain market competitiveness and business survival. A formal approach for organizations to update employees' acquisition of job-related SKAs is through training. Research claimed that training was an important factor that could facilitate a firm's expansion, develop its potentials and enhance its profitability (Cosh, *et al*, 1998). Tung-Chun (2001) concurred with this, stating that educated and well-trained employees are a prerequisite for an organization's competitive advantage.

In order for an organization to enjoy the returns on training investment, the training itself must first be approached systematically following certain steps, beginning with, an identification of training needs, followed by the design and development of an appropriate training to serve the needs, the implementation of the training according to

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the predetermined plan, and finally the evaluation of the training programme to determine whether the original needs had been achieved. Execution on these steps is believed to ensure training effectiveness (Blanchard and Thacker, 2003; Goldstein and Ford, 2002; and Noe, 2005).

Among the steps in the training cycle, training needs analysis (TNA) is often considered the most important and therefore, should precede any training intervention (Goldstein and Ford, 2002; Palmer, 1999; Reid and Barrington, 1997; Reay, 1994; Ostroff and Ford, 1989; Boydell, 1976; and McGehee and Thayer, 1961). It is believed that TNA not only ensures returns on investments in training by organizations, but also as the first stage of the training cycle, it minimizes errors possibly made in the training programs (Elbadri, 2001). A considerable relationship is also claimed to exist between TNA and training effectiveness (Tung-Chun, 2001).

Many organizations unfortunately fail to acknowledge the importance of the TNA step in practice. Previous researches showed that approaches to training were often conducted informally and unsystematically with most organizations relying heavily on top management judgments to make training decisions such as types of training to invest in and which employees to receive training (Mahler and Monroe 1952, cited in Moore and Dutton, 1978; Erffmeyer, *et al*, 1991; Amos-Wilson, 1996; Agnaia, 1996; and Elbadri, 2001). Evidence also showed that training conducted in organizations was often not strategic, as training needs were not properly assessed to determine how such needs contributed to the overall strategic objectives of the organizations (Amos-Wilson, 1996; and O'Driscoll and Taylor, 1992).

Such an ad-hoc approach to training could affect organizations as well as the theory and practice of training. For organizations, conducting training without proper analysis might result in poor training investments where money is spent on needless 'wants' rather than true 'needs'. Organizations may also make the mistake of trying to solve performance problems which have no correlation between employees' levels of SKAs and purported training solutions. Absence of the TNA process may result in the training programme having little or no contribution to the achievement of organizations' objectives. These faults may in the end affect the credibility and professionalism of the human resource development field and practice. One of the pressing challenges of human resource development is the need for and ability of its practitioners to provide evidence regarding the positive contribution of human resource development interventions, such as training, to organizational performance (Short, *et al*, 2003). Such deficiencies and lackadaisical attitudes in TNA practice make it difficult to prove the value of training to organizations.

Existing literature regarding TNA shows that most studies conducted on organizations' training / TNA practices were done overseas. Due to cultural and national differences, these findings might not reflect similar descriptions regarding TNA practiced in South

East Asia, and specifically among organizations in Malaysia. There were similar studies conducted in Malaysia (for example Poon and Rozhan, 2000; Rozhan, 1998; and Zakaria and Rozhan, 1993). However, the scopes of these researches were not specific to TNA and the organizations used in their studies were limited to only certain manufacturing and service sectors. The findings therefore may not be accurate to describe TNA practices of organizations in other sectors.

The objectives of this study were thus twofold: to provide empirical evidence on the methods and techniques that organizations used in the TNA process, and to examine the perceptions of training practitioners of organizations regarding their TNA practices.

2. Literature Review

In order to design training programmes which satisfy both the organization and its employees, training needs must be identified by performing three levels of analysis, i.e. organizational, operational and individual analysis. This tripartite framework is considered to have been first developed by McGehee and Thayer in 1961. In their opinion, TNA should be approached like a research that has to be conducted in a systematic and continuous manner by employing certain techniques. After almost five decades, McGehee and Thayer's TNA framework is still heavily referred to in training literatures and serves as a foundation for most subsequent TNA models, such as that by Goldstein and Ford (2002).

Organizational analysis involves the examination of an organization's mission and strategies to identify training needs. Operational analysis determines whether the SKAs required of each job in an organization contributes to the achievement of the preset objectives. The TNA process continues to the third level whereby the performance of each individual employee is assessed to determine whether he / she performs according to the standards and if discrepancies occur, to decide whether training can be used to close the gap.

The terms 'method' and 'technique' to perform TNA are often used interchangeably in the literature. Some authors (for example Chiu, *et al*, 1999; Goldstein and Ford, 2002) treated them as similar i.e. tools used to identify training needs. This study, however, makes a distinction. Methods refer to the instruments that analysts use to collect data for TNA purposes. Techniques, on the other hand, are the procedures to be carried out in order to identify training needs which involve the use of some data collection methods.

The data collection methods can be divided into two broad categories according to the types of data they produce: quantitative data and qualitative data. Examples of quantitative methods are questionnaires and numerical tests, whereas, interviews, focus groups, on-site observations and reviews of literature or records are qualitative methods which are normally used when analysts need to explore in detail the data they have already discovered quantitatively. In order to generate a more accurate and comprehensive picture of a training need, it is often advisable to adopt more than one

method from both quantitative and qualitative data (Wagonhurst, 2002). Obtaining data involving multiple views from different individuals at different levels of management is also important to determine needs at organizational, operational and individual levels.

The methods used for TNA purposes were not exclusive to the TNA field. Based on a literature review over a period of 25 years, Chiu, *et al* (1999) found that most TNA methods were not originally developed for the purpose of conducting TNA therefore, said to be less effective to determine organizational future needs. A general scan of the TNA literature also showed that TNA data collection methods have not changed much. In 1980, Steadham proposed and tabled several data collection methods to determine training needs. Now, a few decades later, the same methods are still recommended in several training references such as Noe (2005), Goldstein and Ford (2002) and McCoy (1993). Some data collection methods, such as review and examination of available documents, however need to be used cautiously. Although such data often have a direct focus on performance issues, nevertheless it may not be totally suitable and accurate for TNA purposes since crucial information such as detailed descriptions of the performance problem and its actual cause(s), is often missing. Further investigations are often required to determine if training programmes might be the best remedy.

Several techniques were discussed in the literature regarding their applications to determine training needs at each of the tripartite levels of analysis. As data collection methods, most of these techniques were also not originally created for TNA purposes. This is especially true with regard to techniques used to perform organizational level analysis like organizational scanning, SWOT (acronym for strengths, weaknesses, opportunities and threats) analysis, PEST (acronym for political, economic, social and technological) analysis and balanced scorecard. All of these techniques were not originally developed for TNA purposes and were more commonly associated as tools in the field of strategic management. However, the use of these techniques to identify organizational training needs were mentioned and / or discussed by several authors like Chiu, *et al* (1999) and Craig (1994).

The basic notion of the organizational scanning technique and PEST analysis is the same in which both analyze macro-environmental factors of an organization such as customers, suppliers, competition, socio-economy, technology and government policies. This information is used to assist the company in developing effective responses and strategies which may include training interventions to enhance its human resource capabilities. Research has claimed that organizational scanning technique is linked with improved organizational performance (Newgren, *et al*, 1984; Dollinger, 1984; West, 1988; and Murphy, 1987). SWOT analysis is often used in conjunction with organizational scanning or PEST analysis. A firm which identifies its strengths, weaknesses, available opportunities and foreseen threats could use such information to come up with courses of action by matching organizational resources and capabilities to the competitive environment in which it operates. Finally, the balanced scorecard that was developed by Kaplan and Norton in 1996 involves measurements of an organization's performance based on four balanced perspectives: financial, customers, internal business processes, and learning and growth. Information derived from this

techniques is then used as a basis for the formulation of strategies throughout the organization.

Several techniques used to perform operational analysis are job analysis, competency analysis (Dubois and Rothwell, 2004; and Noe, 2005), skills inventory and managerial skills audit / management audit (Osborne, 1996). The competency analysis technique is probably the most popular today since its focus is not limited to current performance discrepancies but goes beyond and examines future needs. The competency analysis technique enables organizations to discover not only the SKAs but also the values and personal characteristics necessary for both current and future organizational demands.

Some techniques to identify training needs at individual level are repertory grid analysis technique (Peters, 1994, Craig, 1994; and Osborne, 1996), versatility chart (Osborne, 1996), diary analysis (Osborne, 1996) and critical incident (Osborne, 1996; and Craig, 1994). However, the most common technique used by many organizations is performance review / appraisal (Wessman, 1975, cited in Leat and Lovell, 1997; and Osborne, 1996). Although widely practised, unfortunately, it is also considered one of the most complex and controversial in the human resource field (Roberts, 2002). In terms of TNA, the use of performance appraisals to determine training needs is criticized on issues that can affect the accuracy of the identified needs such as reliability of appraisers' judgments in appraising employees' performances and the extent to which they could properly match appraisees' weaknesses with the training solution (Leat and Lovell, 1997; and Herbert and Doverspike, 1990).

3. Methodology

The population for the study was drawn from the directory of *Malaysia 1000* that listed the top 1000 companies. These companies were chosen based on their business performance judged on a number of criteria such as turnover, profits, profit margin and return on capital. As these companies were considered the most successful in Malaysia, it was assumed that they tended to be more committed towards training and development activities compared to less successful ones. This assumption was made based on evidence suggesting that company size and financial resources could be the factors that influenced companies' attitudes towards employee training and development (eg. Westhead and Storey, 1997, cited in Tung-Chun, 2001). Twenty-seven percent (278) of the companies were randomly selected based on Krejcie and Morgan's (1970, cited in Sekaran, 1992) sampling table.

Survey questionnaires were employed to gather data and were developed by modifying previous studies by O'Driscoll and Taylor (1992), Agnaia (1996), Gray, *et al* (1997) and Elbadri (2001). A draft of the questionnaire was also reviewed by a consultant cum trainer experienced in the TNA field and improvements were made based on this person's comments.

The questionnaires were sent by post addressed to human resource directors / managers of the companies. A cover letter was attached explaining the purposes of the

study with a specific request for the questionnaire to be completed by staff directly in charge of TNA-related matters. A few strategies were employed to encourage participation and to ease reply of the questionnaires and these included the provision of self-addressed stamped envelopes, complimentary gifts and a lucky draw contest with an attractive prize.

Data collection began at the end of February 2005 and ended on May 2005. Out of the total of 278 questionnaires distributed, 84 questionnaires (30.3%) were returned which is considered acceptable (Sekaran, 1992; and Diamantopoulos and Schlegelmilch, 1997). The analysis of data was carried out using the SPSS Window.

4. Results

Table 1 displays that the majority of the respondent companies belong to the manufacturing sector (60.7%). This figure is probably due to the fact that many of the companies listed in the Top 1000 in Malaysia are actually manufacturing companies, and thus have an automatically higher chance of being randomly picked as study samples. The second highest number of respondents (29.8%) identified their companies as belonging to other sectors such as retail / wholesale, information technology, trading, power generation, and pharmaceutical.

Table 1: Respondents by Organization Sector

Sectors	%
▪ Agriculture, forestry and fishing	3.6
▪ Mining and quarrying	0.0
▪ Manufacturing	60.7
▪ Construction	2.4
▪ Transport, storage and communication	1.2
▪ Finance, insurance, business services and real estate	2.4
▪ Other sector	29.8
Total	100.0

Eleven data collection methods were listed in the survey (Table 2). It was found that to a certain extent, all methods were used by the companies. However, the most popular method used was the performance appraisal form (40.5% stated this practice as 'always'). This finding corresponds with Agnaia's (1996), who reported performance appraisals and job performance reports as one of the predominant TNA approaches / techniques in Libyan companies. Such practice is perhaps of no surprise as performance appraisals are often considered the most common and widely used method in TNA (Brown, 2002 and Osborne, 1996).

Table 2: Data Collection Methods

Methods		N	R	S	F	A
▪ Performance appraisal forms	%	2.4	1.2	17.9	35.7	40.5
▪ Questionnaire surveys	%	7.1	9.5	25.0	27.4	22.6
▪ On-site observations	%	7.1	6.0	23.8	45.2	11.9
▪ Individual interviews	%	8.3	15.5	17.9	39.3	10.7
▪ Focus groups	%	6.0	11.9	33.3	27.4	11.9
▪ SKAs tests	%	10.7	8.3	31.0	26.2	15.5
▪ Brainstorming	%	13.1	10.7	33.3	27.4	6.0
▪ Document reviews	%	11.9	17.9	32.1	25.0	2.4
▪ Advisory committees	%	17.9	21.4	22.6	23.8	3.6
▪ Assessment centers	%	15.5	22.6	28.6	16.7	4.8
▪ Delphi method	%	25.0	20.2	26.2	10.7	1.2

Indicators: N - Never, R - Rare, S - Seldom, F – Frequent and A – Always

In terms of TNA techniques (Table 3), the study found that SWOT analysis was the main technique used by the organizations to analyze their organizational needs. Only 50.0% or less of the organizations frequently used the TNA techniques which implies that they probably did not analyze training needs at organizational level often enough or were just not very familiar with the techniques. In addition, KSA analysis and performance reviews / appraisals were found to be the most common techniques that the organizations used to analyze their operational-level and individual-level needs respectively.

Table 3: Techniques Used in TNA

Techniques		N	R	S	F	A
a) Organizational level						
▪ SWOT analysis	%	3.6	6.0	16.7	50.0	16.7
▪ Organizational scanning	%	3.6	8.3	25.0	45.2	9.5
▪ Balanced scorecard	%	15.5	9.5	23.8	29.8	10.7
▪ PEST analysis	%	21.4	17.9	29.8	19.0	1.2
b) Operational level						
▪ Task / KSA analysis	%	1.2	1.2	15.5	48.8	31.0
▪ Competency analysis	%	0.0	4.8	19.0	46.4	26.2
▪ Job analysis	%	0.0	2.4	21.4	53.6	16.7
▪ Skills inventory	%	1.2	3.6	28.6	36.9	21.4
▪ Managerial skills audit	%	1.2	7.1	33.3	41.7	6.0
c) Individual Level						
▪ Performance appraisal	%	0.0	1.2	10.7	42.9	44.0
▪ Critical incident	%	7.1	14.3	29.8	32.1	8.3
▪ Repertory grid analysis	%	17.9	13.1	35.7	20.2	2.4
▪ Versatility chart / analysis	%	17.9	15.5	36.9	19.0	1.2
▪ Diary analysis	%	19.0	16.7	39.3	13.1	1.2

Indicators: N - Never, R - Rare, S - Seldom, F – Frequent and A – Always

Five statements were provided to determine the respondent’s perceptions regarding TNA practices in their respective organizations (Table 4). The respondents felt that the TNA stage received considerable emphasis in their organizations which ensured that training activities they conducted were effective. 78.6% of the respondents agreed with the statement. 84.5% of respondents also thought that training needs would only be fulfilled if they were in line with the organizational strategic needs.

Table 4: Perceptions towards TNA Practices

Statements		StD	D	SID	SIA	A	StA	Mean
1. TNA stage is emphasized in your organization’s training practices to ensure training effectiveness.	%	0.0	3.6	6.0	10.7	39.3	39.3	5.06
2. Training needs will only be fulfilled if they are in line with your organizational strategic needs.	%	0.0	2.4	2.4	8.3	39.3	45.2	5.26
3. TNA methods used by your organization produce clear, relevant, specific data on performance discrepancies.	%	0.0	2.4	8.3	32.1	40.5	15.5	4.59
4. TNA methods used by your organization make it possible to distinguish between training that employees <i>need</i> to perform their jobs and training that they <i>want</i> but do not need to perform their jobs.	%	0.0	6.0	8.3	26.2	41.7	16.7	4.55
5. TNA conducted in your organization is able to differentiate performance problems caused by employees’ lack of skills, knowledge and abilities (SKAs) and problems caused by other factors.	%	1.2	1.2	11.9	29.8	40.5	14.3	4.52

Indicators: StD – Strongly disagree, D – Disagree, SID – Slightly disagree, SIA – Slightly agree, A – Agree, and StA – Strongly agree.

For statements number 3, 4 and 5, mixed results were found, which could be due to a few reasons: the respondents were probably not sure whether TNA methods used in their organizations were able to meet the stated criteria (statement 3) nor could distinguish between training ‘needs’ and training ‘wants’ (statement 4), nor whether a fine line was drawn between performance problems caused by SKAs deficiencies or whether originating from other factors (statement 5).

5. Discussions and Conclusions

The study showed that the top 1000 organizations in Malaysia used several data collection methods and techniques to analyze their training needs. Nevertheless, their considerable reliance on performance appraisals to collect overall TNA data and to identify employees' training needs is a concern. It should be noted that performance appraisals could be a useful method in TNA only if they are approached properly to minimize its flaws. Suggestions by Herbert and Doverspike (1990) could be applied whereby they emphasized the importance of setting up the intention to use the performance appraisal for TNA purposes prior to its development and implementation so that the instrument could be designed and developed accordingly.

Results of the study also suggest that the companies had positive opinions overall regarding their training and TNA practices. The majority stated that the TNA process was emphasized in their training practices. Their adoption of several data collection methods and TNA techniques support this belief. This finding also concurs with an earlier study by Poon and Rozhan (2000) which reported that a large majority of firms in Malaysia had claimed they preceded their training with TNA. This finding on the other hand contrasts with results from most other similar studies conducted elsewhere which found the reverse (Agnai, 1996; Gray, *et al*, 1997; and Erffmeyer, *et al*, 1991).

The respondents also believed that their training efforts were strategic. This feeling is probably true for certain reasons. Firstly, evidence was found to suggest that the organizations carried out all three levels of analysis in the TNA process as suggested by many scholars, which by so doing, helped the companies plan training efforts based on their strategic needs. Secondly, the organizations adopted certain techniques to analyze their needs which involved examination of both internal and external environments.

They also seemed quite confident that the methods they adopted to analyze training needs could produce clear, relevant and specific data on performance discrepancies; could distinguish between training 'wants' and 'needs'; and could differentiate performance problems caused by employees' lack of SKAs and those caused by other non-SKAs factors. However, this findings must again, must be treated with caution as it is not known whether the method most commonly used (i.e. performance appraisals) was effective enough to be able to fulfill all the three criteria. Therefore, in that respect, the results of the study probably do not differ much compared to what was reported by Gray, *et al* (1997) and Elbadri (2001) who both found mixed evidence regarding the perceived reliability and validity of the TNA methods used by respondents in their studies.

To conclude, the study found that the top 1000 corporate companies' practices of TNA were quite systematic and in accordance with the suggestions in the literature in the sense that multiple data collection methods and techniques were adopted to identify training needs. However, their approaches were probably less sophisticated and involved minimal analysis. The extent to which their approaches could produce

accurate training needs is also questionable due to the shortcomings of performance appraisals as widely acknowledged in human resource literature. The performance appraisal method is also less effective as it tends to focus only on present performance problems / needs while being deficient in determining future organizational demands, an imperative for organizations to remain competitive in today's fast-paced and increasingly global business environment.

6. Limitations

Samples of the study comprised individuals in charge of training / TNA functions in their respective organizations. The respondents were asked to answer the questions based on their organizations' past practices on TNA and this emphasis was also reflected in every sentence structure in the questionnaire. The quality of the data obtained from such an approach might be questionable due to possible inaccuracies or exaggeration by each representative of the companies. Although all necessary precautions were taken in the study to enhance reliability and accuracy of the data, such possibilities are not unusual. The data reported in this study may thus need to be treated with some caution as it might be subject to much personal opinion or perception. Future research focusing on a single organization may be helpful to describe more accurately and in greater detail the actual approach to TNA.

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