Systematic Competency Based Training Needs Analysis (SCTNA)

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Abstract: There are some features that employees must have for accomplishing the requirements of their jobs. Competency based training needs analysis is dealt with the identification of the trainings that must be taken by the employees based on the comparisons of the required features and existing competencies of them.

That project should not only upgrade the suitability of the employees' behaviors to the organization but should also help reaching the goals of the organization. By paying attention to the existing jobs, values and career paths of the individuals, upgrade the employees' knowledge, abilities and competencies and provide the necessary behavioral changes. This paper outlines a systematic methodology for competency based training needs analysis.

Key words: training, competency, competency based training, training needs analysis, systematic, systematic training needs analysis

1. Introduction to SCTNA

There are some features that employees must have for accomplishing the requirements of their jobs. Competency based training needs analysis is dealt with the identification of the trainings that must be taken by the employees based on the comparisons of the required features and existing competencies of them.

That project should not only upgrade the suitability of the employees' behaviors to the organization but should also help reaching the goals of the organization. Why should we need training?

- Increasing competencies.
- Increasing performance.
- Understanding the strategies and goals of the company.
- Meeting the expectations of the customers.
- Developing new products.
- Developing career plans.
- Redesigning the job contents.

By paying attention to the existing jobs, values and career paths of the individuals, upgrade the employees' knowledge, abilities and competencies and provide the necessary behavioral changes.

This paper outlines a systematic methodology for competency based training needs analysis (Figure 1.)
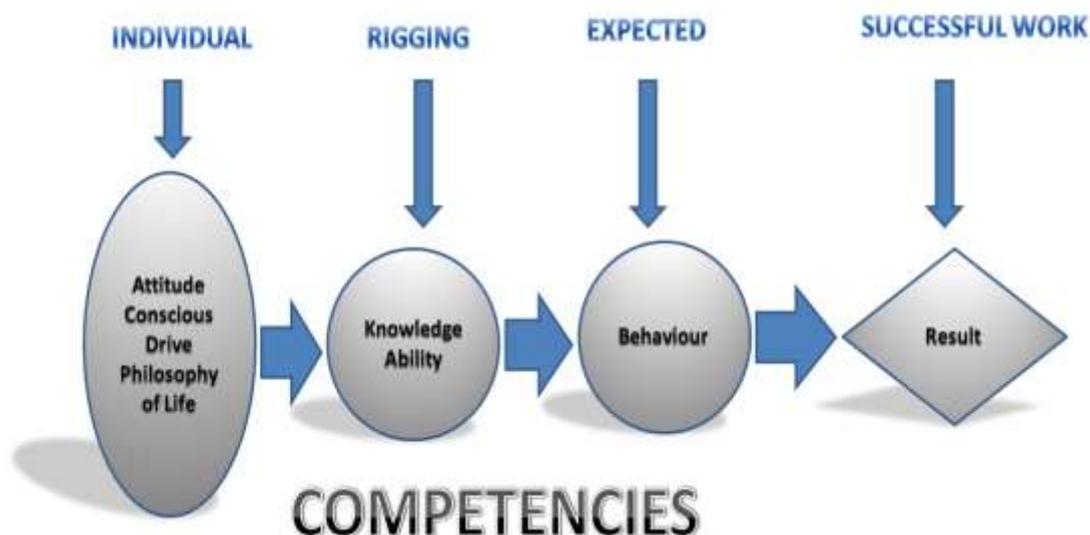
Figure 1 SCTNA – Reference Sheet
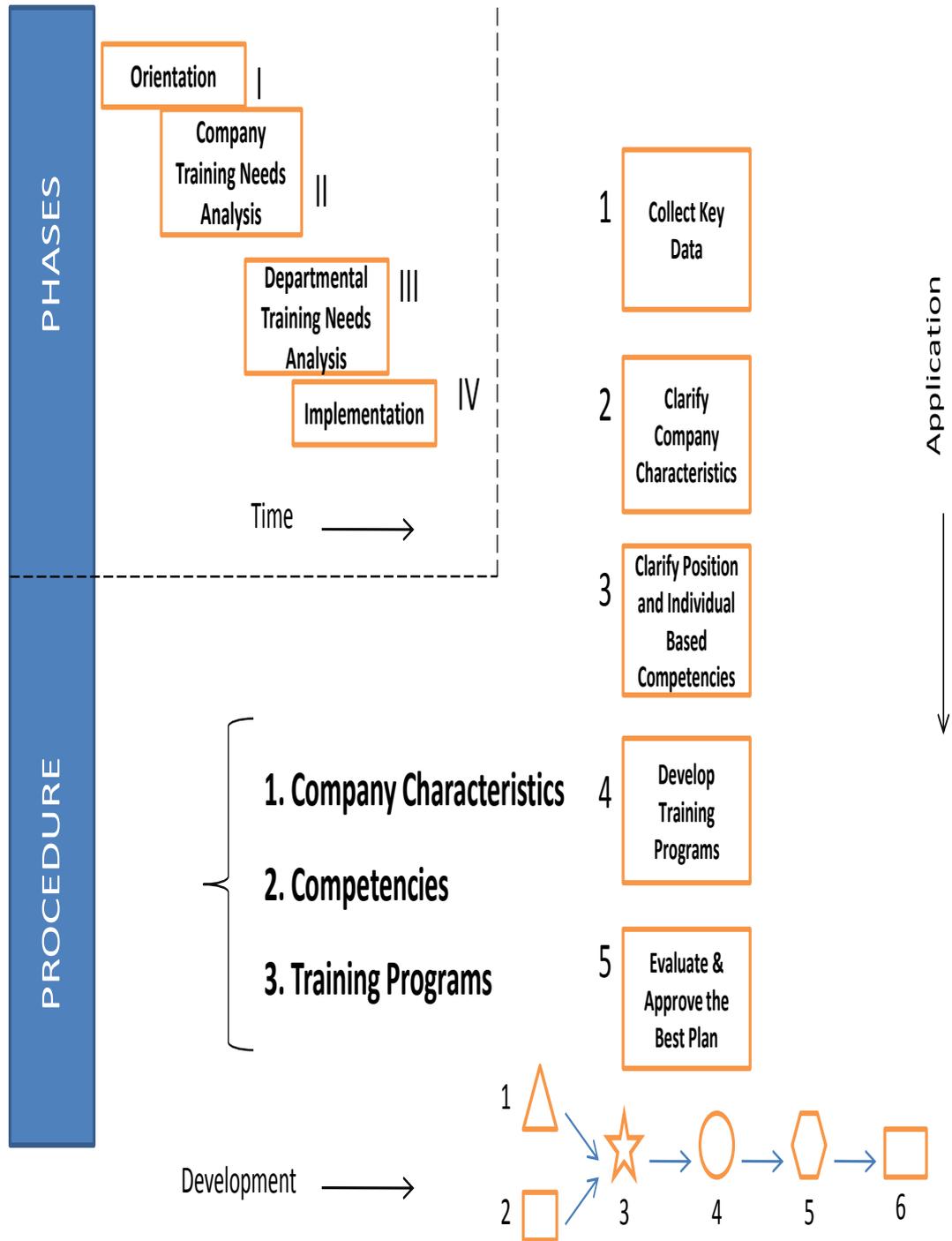
(Source: Author)

2. Four Phases

Any competency based training needs analysis can typically pass through four phases.

2.1 Orientation

The main question of the orientation is "what is our objective?" in this project. That is to orient ourselves, to understand the project, the process and the people involved. Then to organize how we propose to plan and schedule the planning. The main issue is "what we do?" and "How we do it?"

- Understand the project: What? Why? Who? When? Where?
- Understand the purpose or objective(s), the external conditions, the situation(s), the scope/extent, any budget limitations and the desired form of our planning output.
- Understand and document the planning and people issues.
- Make a schedule for the project's planning.

We can use "Project Orientation Worksheet" that is designed by Muther (2011). Table 1 has three components:

- Project Essentials.
- Planning Issues.
- Planning Schedule.

In Project Essentials, enter:

- The objective(s) or propose(s) or goal(s) of this project.
- The external conditions like: synchronization with other projects, specific limitations, overall policies or larger operational procedures...
- The situation(s): physical, procedural & personal situation circumstances.
- Scope/extent of the project: How big? How detailed? When needed?
- Form of this planning's output: Written report? Action plan approved?

Goals for individuals:

- Increasing the motivations of them.
- Helping them to reach to their targeted careers.
- Creating harmony and collaboration among them.
- Providing satisfaction.
- Improving the competencies of them.

Goals for company:

- Increasing the efficiency and effectiveness.
- Adjusting people more easily to the changes.
- Decreasing the error rate.

In Planning Issues, we enter each problem, uncertainty, question ...one line for each ...on the left. In the first column, record how important the issue is to this project. Here we enter a vowel-letter as our order-of-magnitude judgmental rating:

A – Absolutely important
E – Especially important
I – Important issue
O – Ordinary important
U – Unimportant

In the "Responsible" column, enter who is responsible to get the issue resolved, and mark the initials of the approver.

In Planning Schedule, list each action required to plan what we intend to do in order to prepare training needs analysis for conducting the project. List one action on each line, and show who is responsible for doing it. Set a calendar schedule at the top of the vertical-lines.

2.2 Overall (Company) Training Needs Analysis

The general requirements and principles of company-wide training will be determined. The aim in this Phase is to determine an overall competency based training needs, in such a way that in principle it meets the objectives of the company and integrates with the external conditions.

2.3 Detailed (Departmental) Training Needs Analysis

Detailed competency based training needs analysis will be applied to understand the requirements of every individual function (department,) that in turn means three fundamentals are valid for every department. In short, this is a competency based training needs analysis conducted for each department, as identified in Phase1.

Phase3 repeats the same essential analysis process, but it does so at a more specific level.

Table 1: Project Orientation Worksheet

Description ———————————————————— Project No:——————————

Who is Responsible? ————————— Authorized/Initiated by ————— Date————

When Project Starts ————————— When Planning Starts ————— Sheet — of—

PROJECT ESSENTIALS

1. Project Objective(s) ——————————————————————
2. External Condition(s)——————————————————————
3. Situation(s)   ——————————————————————
4. Scope/Extent   ——————————————————————
5. Form of Output   ——————————————————————

PLANNING ISSUES	Imp.	Resp.	Proposed Resolution	Ok'd by
1.				
2.				
3.				
4.				

PLANNING SCHEDULE						Notes & Act
Task or Action Required to Plan	Who					
1.						
2.						
3.						
4.						

Reference Notes:————————————————————————————

(Source: Muther, 2011)

2.4 Implementation

This is probably the most rewarding phase. This phase is dedicated to carrying out the plans. It includes the actions needed to make the plans come true. Who will responsible and duration of action has to be clarified. This phase sets the framework for dealing with the "expectations" on time and on budget. We can use MS Project tool in this phase (Table 2.)

This is the output of the project that is prepared for each trainee group. One of the key point is to identify and underline the expected competencies from each training program.

Table 2: Sample Implementation Plan Worksheet

ACTIONS TO TAKE	TEAM	BUDGET	ACTION TIME PLAN											
			Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Company Politics & Strategies			▨											
Job Analysis & Job Descriptions			▨	▨										
Identification of the Competencies				▨										
Preparing the Positional Surveys					▨									
Sending & Taking Back the Positional Surveys						▨	▨							
Analysing the Positional Surveys								▨						
Integration of the Competencies & Traniee Programmes									▨	▨				
Preparing the Individual Surveys										▨				
Sending & Taking Back the Individual Surveys											▨	▨		
Analysing of the Individual Surveys													▨	
Outputs of the Project														▨

(Source: Author)

3. Three Fundamentals

Three fundamentals of SCTNA are Company (Department) Characteristics, Competencies and Training Programs (Figure 2.)

Figure 2 SCTNA – Fundamentals
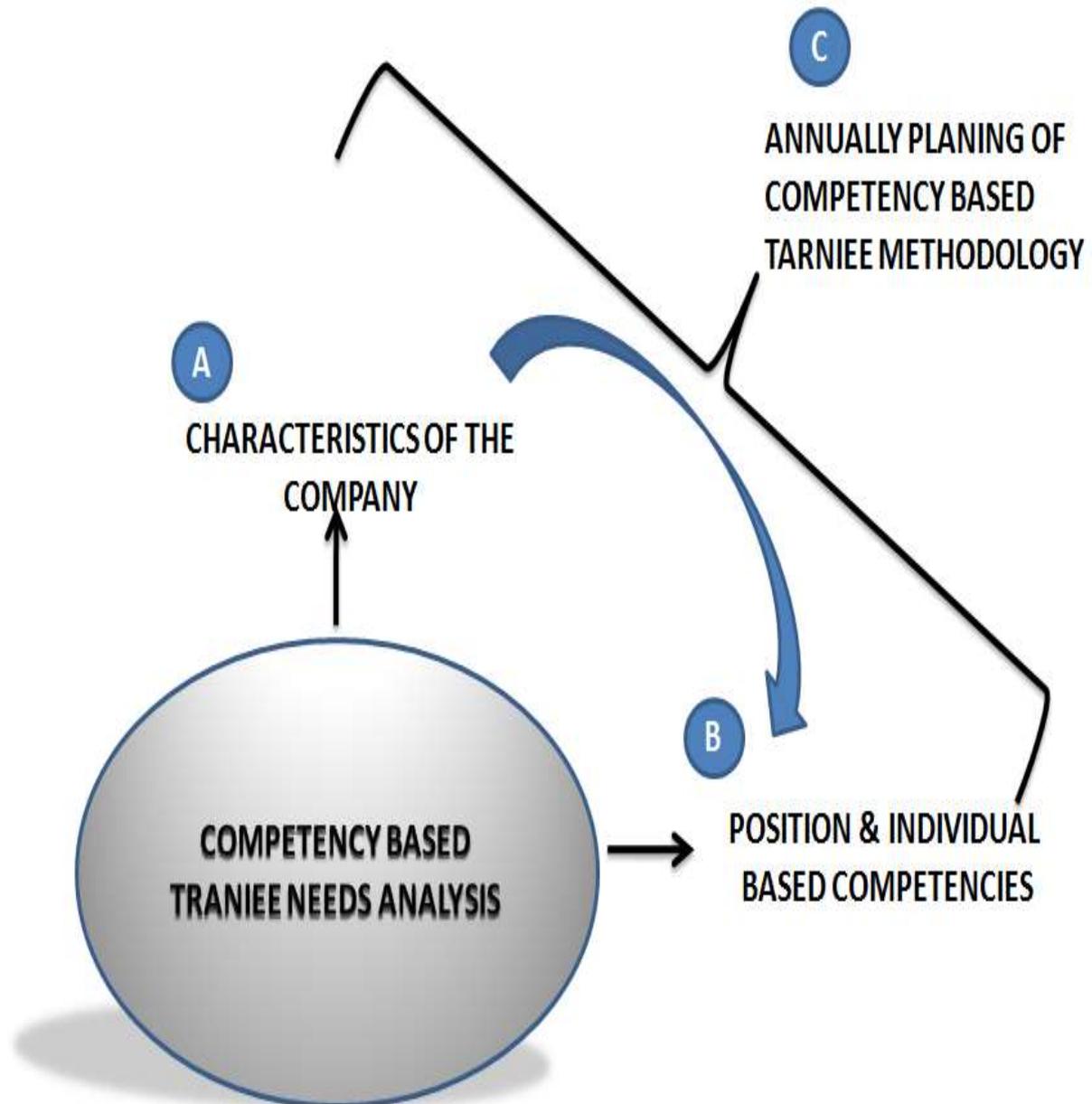
(Source: Author)

3.1 Company (Department) Characteristics

Based on the strategies and values of the company (department), identifying the requirements for structural positions is considered as fundamental A. Accordingly, the questions that should be investigated are:

- What are the causes of organizational weaknesses?
- Is training a necessity?
- At what degree training is needed?
- What should be the aim of the training?

3.2 Position & Individual Based Competencies

In position based competencies, by being referred to the job specifications, the competencies that are necessary for each position are determined. In individual based competencies, personal gaps and therefore personal competencies that are necessary for meeting the required specifications are determined. At the end, both of the results should be integrated.

3.3 Training Programs

Fundamental C, which is formed by the integration of the first and second fundamentals, is the training programs specific for each department and generic for the whole organization. Budget plans, time plans and contents of the trainings are all covered within the scope of this fundamental.

4. Five Sections

In the framework of the full planning pattern, for the 2nd and 3rd Phases, you need to pass through the following five sections in order to develop the possible best competency based training programs.

The short form condenses the four phases into six steps and combines Phase2 and Phase3. Short form is applicable to short or smaller planning assignments or situations.

4.1 Collect Key Data

There are some significant information that must be investigated at the beginning of the Project. These investigations are categorized into two. The first should be done with the top level management of the company for understanding the vision, mission, strategies and values of the company.

The second research should be done with the Human Resources department. The second investigation includes the job analysis and descriptions of the organizational structure.

4.2 Investigate & Clarify Company (Department) Characteristics

Clarifying company characteristics starts with investigating vision, mission, basic values, strategies, and continues with understanding organization structure and job descriptions. In short, characteristics of the company are categorized as:

- General information about the company.
- Job descriptions and organizational scheme.
- Competency Model (Figure 3.)

Competency Model (Naquin, et.al, 2006) is the determination of the managerial and leadership competencies in addition to the basic and technical competencies that are specifically necessary for the firm. Identification of the competencies are done through the understanding of job analysis, descriptions and organizational scheme. Every main competency in the competency model has subtitles that should be determined. Examples of subtitles for each main competency are given below.

Figure 3 Competency Model
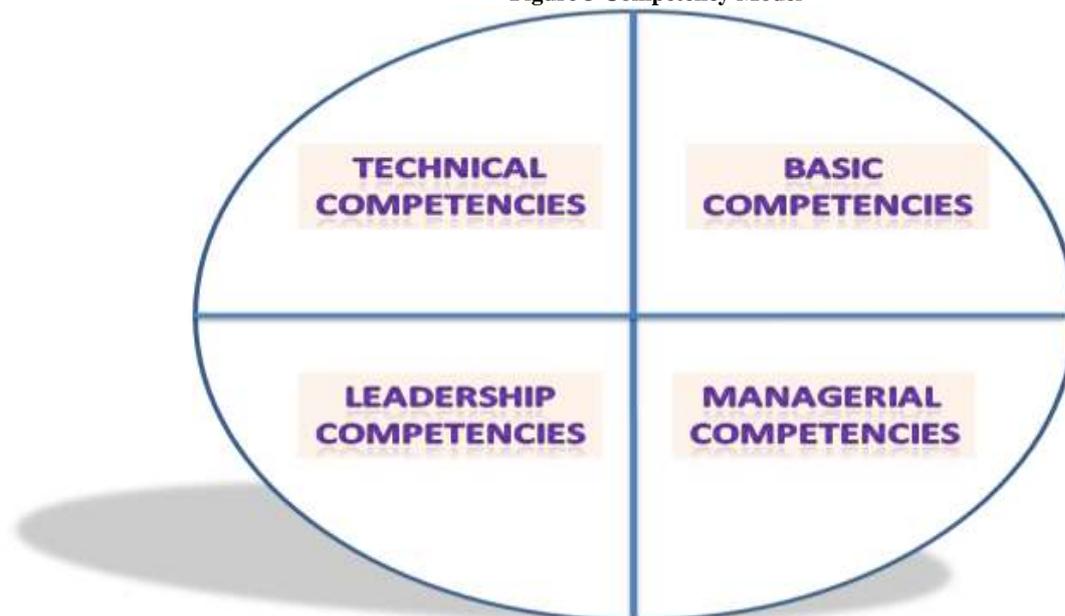
These competencies are necessary for all employees independent from their positions and titles. These competencies can be different according to the company (department) and its industry. Some basic competencies are given above.

Managerial competencies are understood by investigating the job analysis and job descriptions. These competencies are determined through the identification of middle and top level managers' requirements. These competencies should be unique for the company (department.) Some managerial competencies are given above.

The competencies that should be necessary for the leadership positions, such as team leaders, of the company (department.) They should also have basic competencies such as effective communication for being an effective leader for their team. Some leadership competencies are given above.

Although technical competencies are "must" for all the employees in the company, they can change rapidly from level to level or from department to department. While marketing department requires information about the product and market, product department requires information about process/process management.

Significant points that must be considered while clarifying the competencies are:

- Focusing on the main facilitating area of the company.
- While basic competencies are identified, organization must be regarded not individuals.
- While clarifying the leadership, managerial and technical competencies, a sharp discrimination must not be done.

4.3 Clarify Position and Individual Based Competencies & Relate to Company (Department) Characteristics

Human resources department decides at what degree competencies are necessary for the related positions. This is done for every position.

Individual competencies are determined by a survey that is applied to all employees. The aim of this survey is to identify the required competency levels for the employees. Based on the strengths and weaknesses of the employees, the competency level gaps are determined.

After determining the sub competencies in the second step, we develop the behavioral indications of these competencies that help us establishing the content of training programs. An example form is given in Table 3.

Table 3: An Example Competency Form

EFFECTIVE COMMUNICATION		
Effective communication is an essential component of organizational success whether it is at the interpersonal, intergroup, intragroup….		
SUBCOMPETENCIES		**BEHAVIORAL INDICATIONS**
	Oral Communication	Effective and clear statement of what is desired to be said…
	Written Communication	……………………………………
	Body Language	……………………………………
	Empathy	……………………………………

(Source: Author)

Positional survey form (Table 4) is generated by the help of the organizational scheme and applied to every position.

Table 4: Positional Survey Form

POSITION: MARKETING SUPERVISOR

A: ABSOLUTELY NEED
E: ESPECIALLY NEED
I: IMPORTANTLY NEED
O: ORDINAARILY NEED
N: NOT NECESSARY

Statement	N	O	I	E	A
1. Effective communication is an essential component of organizational success whether it is at the interpersonal, intergroup, intragroup….	X				
2. Effective and clear statement of what is desired to be said…		X			
3. ……………………………………			X		
4. ……………………………………					
5. ……………………………………					
6. ……………………………………					
7. ……………………………………					
8. ……………………………………					
9. ……………………………………					
10.					
11.					
12.					
13.					
14.					
15.					
16.					

(Source: Author)

Position and competency matrix (Table 5) integrates the positions and competencies. The aim is to understand the required competency level for each position.

Table 5: Position and Competency Matrix

CLASSIFICATION OF THE COMPETENCY MAIN COMPETENCY		MARKETING DEPARTMENT			
Behavorial indication of the main competency		MARKETING MANAGER	MARKETING TEAM LEADER	MARKETING SPECIALIST	MARKETING ASSISTANT
SUBCOMPETENCIES	BEHAVIORAL INDICATIONS				
....	....				
....	....				
....	....				
....	....				

BASIC COMPETENCIES EFFECTIVE COMMUNICATION		MARKETING DEPARTMENT			
Effective communication is an essential component of organizational success whether it is at the interpersonal, intergroup, intragroup....		MARKETING MANAGER	MARKETING TEAM LEADER	MARKETING SPECIALIST	MARKETING ASSISTANT
SUBCOMPETENCIES	BEHAVIORAL INDICATIONS				
Oral Communication	Effective and clear statement of what is desired to be said...	A	I	E	O
Written Communication	....	E	O	E	A
Body Language	....	A	A	A	I
Empathy	....	A	E	O	N

(Source: Author)

The survey determines the required level of competencies for each position:
- A: Absolutely Necessary
- E: Especially Necessary
- I: Important
- O: Ordinary
- N: Not Necessary

Individual surveys can also be named as individual based competency inventory. After identifying the competencies for each position, then find out the individuals capabilities and their gaps w.r.t the required competencies by investigating their strengths and weaknesses.

4.4 Develop Training Programs

The main purpose of this step is to fill the required competency levels through deploying the necessary trainings. Based on the detected weaknesses of the employees due to the required competency levels, annual competency based training plans are set.

After matching the training programs to the desired competencies, time plans, budgets, and contents of the programs are determined.

Every competency asks a different training program. At the end of the individual and positional analysis, training plans are developed for each department and employee (Table 6.)

The last part of this section is related with forming the contents of training programs. Form that can be used for each training title is shown in Table 7.

4.5 Evaluate & Accept the Best Plan

Identify each alternative as appropriately as described in Section 4. Prepare a worksheet showing the comparable costs of each alternative. Also, on a separate worksheet, make a comparison of the intangible benefits and risks of each alternative. Compare alternatives, select the best, and get the others to approve it.

Table 6: Training Plans

TRAININGS	TIME PERIOD OF THE TRAINING		ATTANDANCE	NUMBER OF GROUPS	TOTAL PERIOD OF THE TRAINING		COST OF THE TRAINING		COMPETENCIES	TIMING
SUPERVISOR GROUP										
MANAGEMENT TRAINING	2	TAM GÜN	40	2	4	DAYS	4000	USD	"PLANING "CONTROLLING	17 - 18 AUGUST 2008
					4	DAYS	4000	USD		
SPEACIALIST GROUP										
EFFECTIVE COMMUNICATION TRAINING	2	TAM GÜN	15	1	2	DAYS	2000	USD	"VERBAL COMMUNICATION "WRITTEN COMMUNOCATION	20 - 21 June 2008
					2	DAYS	2000	USD		

(Source: Author)

4.5.1 Comparison based on Intangibles

Enter the headings on a fresh copy of the worksheet (Table 8), generated by Muther (2011), checking the box marked "Intangibles" (upper left.) Identify each alternative by a letter – X, Y, Z and give a brief two-to-five-word description for each.

List all factors, considerations or objectives the organization wants the project's intended plan to be achieved. Select or ask your approvers to select the most important factors. Then ask them to weigh the importance of each other factor relative to the most important (10). Indicate each selected weight on the worksheet, and record by whom the weight values were determined (in box above.)

Ask your operations team and/or staff members who will use the proposed plan when installed to rate, for each factor, the effectiveness of each alternative in achieving that factor. Use A, E, I, O, or U to represent the descending order of effectiveness, as noted in upper left-hand box of the worksheet. Enter, in the small rectangular "boxes within boxes" on the form, the selected vowel-letter ratings. Record the name(s) of the person(s) doing the rating.

Table 7: Detailed Training Programs

PROGRAMME PLAN

Name of the Programme	
Code of the Programme	
Timing	
Tranieers	
Kind of Programme	
Methodology of the Programme	
Quota of the Programme	

Targets of the Programme	Knowledge / Ability Bahaviours Job Results

Assessment of the Effectiveness of The Programme

During the Programme	Who	When	How
Knowledge / Ability			
Behaviours			
After the Programme	Who	When	How
Knowledge / Ability			
Behaviours			
Job Results			

(Source: Author)

Table 8: Evaluation of Alternatives Worksheet

EVALUATING ALTERNATIVES

		Project _____	Number _____

COSTS:
  Estimated by .... Approved by ....

By _____ With _____
Date _____ Sheet _____ of _____

INTANGIBLES:
  Weight set by .... Tally by ....
  Ratings by .... Approved by ....

EVALUATING DESCRIPTION

A = Almost Perfect, O = Ordinary Result
E = Especially Good, U = Unimportant Results
I = Important Result, X = Not Acceptable

Description of Alternatives:
  X. _____
  Y. _____
  Z. _____
  V. _____
  W. _____

FACTOR/CONSIDERATION	WT.	ALTERNATIVE				
		X	Y	Z	V	W
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
TOTAL	Annualized Cost (Line____ Plus Line____)					
	Weighted Rated Down Total					

Reference Notes:

a. _____ d. _____
b. _____ e. _____
c. _____ f. _____

(Source: Muther, 2011)

After rating all alternatives for each factor, convert letters to numbers (A=4, E=3, O=1, U=0) and multiply the rated number by the respective weight value. Enter the resulting weighted-rated values on the worksheet.

Down-total the weighted-rated values for each alternative, enter on the worksheet, and record by whom the tally was made. The alternative with the highest total should be the "winner" – subject to cost factors determined separately. In the lower left corner, indicate that these are weighted-rated down totals. Record any explanatory notations at the bottom suitably referenced by an encircled lower-case letter.

4.5.2 Comparison based on Costs

In addition to the intangibles, cost of the programs are also important. Identify each alternative by a letter – A, B, C and give a brief three-to-five-word description for each. This comparison will generally let you identify the lowest cost alternative.

As a result of the 4th section, departmental attendance of employees for the training courses were delivered (Table 9.)

After forming the table, the groupings are done. For example, fifty people may want to attend to the effective communication training. Fifty needs to be divided into groups according to the defined group capacities. This is necessary for timing and budgeting of training. A budget example is given in Table 10.

Table 9: Departmental Attendance of Employees

TRANIEES / DEPARTMENTS	MARKETING DEPARTMENT	IMPORT & EXPORT DEPARTMENT	CALL CENTER	TOTAL
EFFECTIVE COMMUNICATION TRANIEE	10	30		40
WRITTEN COMMUNICATION TRANIEE	25	27		52
BODY LANGUAGE TRANIEE	17	47		64

(Source: Author)

Table 10: An Example Budget Form

TRANING PROGRAMMES	PERIOD OF THE TRANIEE	COST OF THE TRAINING		NUMBER OF GROUPS	TOTAL PERIOD OF THE TRAINING PROGRAMME	TOTAL COST	
EFFECTIVE COMMUNICATION TRANIEE	2 DAYS	2000	$	2 GROUPS	4 DAYS	4000	$
WRITTEN COMMUNICATION TRANIEE	1 DAY	1000	$	2 GROUPS	2 DAYS	2000	$
BODY LANGUAGE TRANIEE							

(Source: Author)

5. Conclusion

There are some features that employees must have for accomplishing the requirements of their jobs. Competency based training needs analysis is dealt with the identification of the trainings that must be taken by the employees based on the comparisons of the required features and existing competencies of them. That project should not only upgrade the suitability of the employees' behaviors to the organization but should also help reaching the goals of the organization.

This paper outlines a systematic methodology for competency based training needs analysis based on three fundamentals and these are Company Characteristics, Competencies and Training Programs. Any training needs analysis can typically pass through four phases, which are Orientation, Corporate Training Needs Analysis, Departmental Training Needs Analysis, and Implementation. In the framework of the full planning pattern, for the 2nd and 3rd Phases, you need to pass through five sections in order to develop the possible best training plan. The short form condenses the four phases into six steps and combines Phase2 and Phase3. Short form is applicable to short or smaller planning assignments or situations. Our aim in this systematic methodology is providing a planning tool for human resources professionals.

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