Chapter 8

Synthesis and Proposed Framework

Introduction

Chapters five, six and seven have brought out qualitative analysis (reviews), case-studies and questionnaire analysis respectively. At the end of each of the above chapters a synthesis of all the emerging learning issues have been done. The learning issues give wealth of information about the strengths and weaker points of the various organizations studied in this work.

In the present chapter, a holistic approach of the above synthesis has been presented logically and a recommended framework has been suggested for ushering in organizational excellence. Also, ways and means suggested for overcoming the constraints emerged out of the study of the representative laboratories of DRDO. The work leads into the drivers of high-performance of the organizations and provides a framework to build strategies for human capital growth. As is observed, the human capital is the foundation of value creation, it is the very genesis of HR core competencies to lay the groundwork for an organization, which is also based on the rise of measurement systems.

Our basic problem has been about linking people, strategy and the state’s performance. And, the biggest and vital question of Balanced Score Card (BSC) is--how best to integrate HR’s role into an organization’s
measurement of business performance. Finally, the most-important goals for accepting the six propositions and management framework is to promote the growth of individual and organizational capabilities. In all this, there are primarily three HR performance drivers for strategy implementation: employee strategic focus, HR strategic alignment, and effective knowledge management.

The crux of the HPWS (High Performance Work System) measures is the central foundation for building HR into strategic asset. A HPWS minimizes the performance of the organization’s employees. Thus, the bottom-line emphasis should be for HPWS for Hitech R&D functions:

(a) HR system alignment  
(b) HR deliverables  
(c) HR efficiency

All the above ingredients, bring down the cost of a product/service by creating values in the organizations by:

(i) Reducing cycle time  
(ii) Controlling processes- reducing technology delivery time  
(iii) Reducing overheads, and  
(iv) Down-sizing (multi-skilling etc.)

1 Synthesis of the Three Types of Studies

Then, a final synthesis of all the ingredients under six dynamic propositions has been attempted and a relationship among them has been tried out to
Validation of Research Propositions

4.1. Validation of Research Propositions

The constraints or weaknesses at a qualitative level. Due to lack of quantitative data in view of the six propositions shown in the Chapter eight. Thus, at a qualitative level, the models proposed in this chapter can be treated as valid and the models proposed in the following sections can be treated as valid. The models proposed in six propositions are in conformity with the linkage map and Target, Visibility, and allied traits observed in the DRDO labs (found from Table 8.1 under Interviews, High, and low levels of validation has been made based on the study and questionnaire categories for all six propositions. High, the various HR functions and their allied learning issues have emerged out of the Qualitative Analysis (interviews) and empirical studies.

Overall from the Table 8.1 it is observed that the propositions Pareto (P-1), Power of Full Engagement (P-4), and continuity (Flexibility) (P-5), of quite higher ratings and six sigma (P-2), Theory of constraints (P-5), and six sigma (P-6), are above average.

A summary of learning issues/parameters towards the end of each chapter is given in Table 8.1 under Interviews, High, and low levels of validation has been made based on the study and questionnaire categories for all six propositions. High, the various HR functions and their allied learning issues have emerged out of the Qualitative Analysis (interviews) and empirical studies.

The various HR functions and their allied learning issues have emerged out of the Qualitative Analysis (interviews) and empirical studies.
Table 8.1: Validation of Research Propositions

<table>
<thead>
<tr>
<th>Research Proposition</th>
<th>Level of validation of the Research Propositions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Interview</td>
</tr>
<tr>
<td>Pareto Law (P-1)</td>
<td>High</td>
</tr>
<tr>
<td>Six Sigma (P-2)</td>
<td>High</td>
</tr>
<tr>
<td>Theory of Constraints (P-3)</td>
<td>Medium</td>
</tr>
<tr>
<td>Power of Full Engagement (P-4)</td>
<td>High</td>
</tr>
<tr>
<td>Continuity (P-5)</td>
<td>High</td>
</tr>
<tr>
<td>HR Balanced Scorecard (P-6)</td>
<td>High</td>
</tr>
</tbody>
</table>

2 Synthesis of Key Learnings

Key learning of various studies are synthesized as per the six research positions, as discussed below.

Pareto Law (P-1)

Focused and committed scientists and intrapreneurs enhance HR core competence (around 70-80 per cent).
Long-term project planning and undertaking short-term duration (two to five years) projects.
Top management attitude is positive (80-90 per cent).
Few organizations working on EQM (Experience Quality Management) rather than traditional and conventional TQM. Also working on ‘Evolvability’ (embedding intelligence in design—smart designs)—ensuring future and mid course corrections adaptable-based on customer’s changing demands. These with newly recruited talented/
exceptional scientists the Pareto Law now should be revised to 30:50:20 from our earlier assumption of 20:60:20.

**Sigma (P-2)**

- Acceptance of change form average 67 per cent to 87 per cent (highest) (E= QxA).
- With newer technology, better time management and better crisis-management (80 per cent) leads to customer satisfaction.
- With most of the DRDO laboratories, now having accredited by ISO 9000:2000 etc. the products/services are of would-class quality.

**Summary of Constraints (P-3)**

- After product-development–follow up actions–are reckoned as a weak-link.
- Under-utilization of personnel is another weak-link in the DRDO.
- Rotation of scientists and other personnel among like disciplined laboratories should be done—it is lacking presently.
- Continuity-management and succession-planning is a weak link in the DRDO labs at present.
- Organizations working on matrix-type are lesser in number. Non-matrix type structure provide lesser flexibility.

**Per of Full Engagement (P-4)**

Focused, committed and passionate-work culture (85 per cent) has brought in professionalism in the DRDO labs.

With the positive top-management attitude (90 per cent), due to existing policy of DRDO, most of the scientists feel that it is now possible to bring in new technologies, i.e. acquisitioning/blending of new technology.
Participative planning and control of the activities (78 per cent) enhance the performance (E=QxA).
Discipline of execution (75 per cent) is visible.
Strong communication (83 per cent) is practiced.
Training and Development (T&D) (90 per cent).

Continuity–Flexibility (P-5)
Some of the main ingredients under this proposition are summarized below:
- Training and development (90 per cent) in one of the labs of DRDO certainly provides flexibility/multiskilling.
- Interchangeability found up to 85 per cent which is very encouraging.
- Participative planning and control activity is around 70 per cent, which is one of the measure of continuity.
- Participative leadership style is also around 80 per cent measure.
- Good acceptance of change and crisis-management are the major flexibility norms.
- Strong communication provides flexibility (83 per cent).
- Decision-making through consensus (67 per cent) is being done in many labs of DRDO- which is reckoned as a flexible yard stick.
- Open management attitude (90 per cent) provides freedom of choice.
- Flexibility in HRM is 70 per cent, which is a positive sign of learning and growth of individuals as well as labs of DRDO.

Balanced Score Card (BSC)–(P-6)
Discipline of execution–XQ is around 75 per cent, which is quite creative.
High performance work system HPWS and high professionalism has been observed upto (85 per cent).

Talented human capital–intake and richly varied technological upshot of 70 per cent, is considered a step forward towards HPWS.

Process controlled by reducing cycle-time, time-management, on-time-delivery, (OTD), and customer loyalty (70 per cent) are few positive considerations/determinants.

Management attitude (90 per cent) customer focus and focused performance (85 per cent) are certainly very strong HR performance drivers.

Customer satisfaction (75 per cent) and customer loyalty (70 per cent) is visible.

Communication is found very strong (83 per cent) in DRDO labs.

3.3 Linkage Map of Variables Accruing Out of Six Propositions

Figure 8.1 depicts a linkage map of all the salient variables emerging out of six propositions and are important thrust-point of chapters five, six and seven, i.e. qualitative study, case–studies and empirical study. Interrelationship and co-creation of these ingredients itself prove the interdependency and interactive nature of these finer HR Architecture system. Also, these HR Performance–Drivers linkages and their interactions (reciprocal) shows the importance of the traits and their articulative success in achieving desired goals.
Figure 8.1: Linkage Map of Variables—Accruing Out of Propositions
Here, it is to be observed that managers at all levels have to coordinate their efforts for achieving human, non-human HR drivers and be for their maximization. For example, for achieving and “developing customer satisfaction and superior quality” it cannot be fulfilled if the line managers are struggling with high staff turn over and insufficient rewards system for service quality.

As another example, we consider that a DRDO labs’ R&D function has ratified timeliness of marketing a new, product-innovations as a ‘key performance indicator (KPIs). By simply understanding how the R&D unit contributes to the organization’s larger strategy implementation programme process, the unit’s HR managers, could readily generate ideas for enabling the R&D unit’s programme a success. Also, suggesting a reward system to prevent may help speed up the achievement of the personnel involved. As, the correct scientist talents and the kind of synergy required for true business partnering between HR and the rest of the organization is the key catchword. In all this, the true dynamic leadership qualities six sigma type like Jack-Welch, Larry Bossidy, Bob Galvin, are exemplary—must be behavioural and not verbal—are considered inherent and inbuilt.

3 Emerging Issues out of Linkage Map of Propositions

The main-thrust or bullet points emerging out of the linkage-map at Table I are enumerated below:

Top management attitude matters. It should be positive, creative and innovative.
Focused and committed approach of working brings in results.
A strategic long-term project planning is desirable and exists in the labs. Acceptance of change and management of change as a true leadership quality should be above par and is existing in the labs. Discipline of execution-making things happen—work-culture attitude is visible. Participative planning and control exists. Participative leadership is found. Crisis management adaptability exists almost in every DRDO lab. Smart work-culture people and scientists working with passionate zeal—modifying the Pareto Law ratio as 30:50:20. This is a differentiation technique, imparting a better delivery of the assigned tasks. Strong-communication has been found to exist in the DRDO labs. Training and development and education activities taking place regularly is a positive sign. Most of the DRDO labs have got accreditation now ISO: 9000: 2000. This imparts labs into a world-class establishments for development of products/services. Interchangeability and other form of flexibility like in HRM, Decision-making by consensus etc. is quite visible in the labs. Customer loyalty, on-time delivery (OTD) and customer satisfaction is adequately visible today in the DRDO labs. All the above parameters and ingredients leave a greater impact on performance excellence and professional competence.

HPWS (High Performance Work System) culture of the labs gives an impetus into converting few DRDO labs into organizational excellence or passionate organization—a world class organization. Decision-making through consensus is taking place in the DRDO labs. It is observed that rotation of scientists and staff in the like disciplines of DRDO labs should take place to avoid stagnancy and also for futuristic prospects. Continuity management and succession planning is at lower key in the DRDO labs. It is also observed that scientists and staffs are under-utilized than desired.
More decentralization, empowerment should be practiced for achieving better flexibility.

More focus on internal career planning should be given.

Post Product-development follow-up practices are lacking.

Promotional avenues should be more effective and better compensation management techniques be practiced.

Organizations working on matrix structures are found more flexible and efficient.

Power of full engagement i.e. high positive energy once connected spiritually to the 'purpose', imparts an upshot in the form of fuel of high performance' (HPWS).

**Causal-Flow Diagram**

The flow diagram of cause and effect are simply a series of linkage among financial and non-financial determinants of any organization's performance. The managers should have the understanding and knowledge of this flow. Comprehension of causal flow pushes managers to think beyond the financials and appreciate the importance of other kinds of success indicators, which are very vital for achieving organizational excellence.

The various strategic objectives as defined in the scorecard are interlinked, the very premise of this kind is the vital core element to Balanced Score Card Approach. Thus, we observe in Figure 8.2, that cause and defect linkage map elaborates on how "providing strategic edge to defence" is vitally interlinked with "provision of training to the employee", and other following off-shorts derivatives, there of. Generally, these objectives provide some strategic mileage to the organization, otherwise, others unimportant ingredients are to be discarded.
Post product-development follow up activities and improvement modalities

Final cost benefit analysis for inhouse product development or importing modalities decision-making at Higher HQs

Following introduction of services procedures of the product

Evaluation, benchmarking with global standard and further quality solutions; PACE-Product and Cycle Time Excellence

Final Availability of the products to users for their combat readiness

Preparations of various documents like part-list, drawings, maintenance manuals etc.

Final dispatch of the product to the user's unit

Making, packaging, for dispatch arrangement etc. to concerned unit

Ordering products in batch numbers, seeing economics part etc.

Rigorous checking of products for quality by R&D, Users and inspection agencies

Orders to various agencies for production of desired no. of products

Final acceptance of the product by users

1
Offering the product after modifications to final user's trial

Offering the product to user's for users' technical trial

Attending to mid-course corrections/improvement in product

Monitoring the overall progress of product activities

Placing order to the competent vendor for few numbers of product

Quality- checks, inspection etc. in the premises of manufacturers (vendors)

In-house testing the product for its meeting the QR (Technical-trial stage)

Development of a prototype product and further design review

Contractual activities/obligations and finding suitable vendor for product development

2
Figure 8.2: Causal Flow Diagram of a Typical Project Activity
Herein, it is observed that in a typical project activity of a product-development right from feasibility study, design and design reviews, sections, development, monitoring, technical-cum-user’s trial to the completion of the product how users-designers, manufacturers (developers, fabricators), inspection agencies, academia etc. are involved. Also after product-development planning for post-development activities like product-improvement, maintenance etc. should also be looked into.

Emerging Work-Culture Models

In the present overall study and from the insights of the organizational dynamics-working, few suggested work-culture models have been emerged for improving throughput and finally helping achieving organization for organizational Excellence” and “Passionate Organizations”. Herein, three models are suggested as under:

- Experiential Learning Model: Based on Power of Full Engagement and EQ Manifestations, and
- A linkage model of total organizational excellence.

All the above three emerging models have been briefly described in succeeding paragraphs. There fundamental concepts, already have been covered and discussed in the chapters two, three and four and in the chapters of various labs’ studies (chapters five, six and seven).
Differentiation Model: Modification to Pareto Law: 30:50:20

As been observed in the chapter four, the Pareto Law 20:80 has been modified at 1st stage as 20:60:20. And, at the 2nd stage or finally it been shown as 50:50 which gives a premise of world-class organization.


In the present study, especially from the findings of chapter five, six seven, it becomes evident that:

Management attitude is very positive.
Focused and committed work-culture exists/emerges strongly.
Training and development is very encouraging and highly productive.
Co-creational values, i.e. labs and customer interacted values are predominantly higher.
Young scientist talent, who are energetic and vibrant work passionately.

The Pareto Law taken as 20:60:20 earlier now requires modification due to differentiation in the personnel work-culture difference.

Considering the above powerful parameters determinants a substantial paradigm shift to upper circle-concentration, is imparted, making in 20 per cent to 30 per cent and middle 50 and bottom 20. The better activity DRDO labs may be assigned this differentiation norm 30:20).
These working differentiation norms may be different for different organizations, firms or laboratories. But in the present study it is found that the excellent talent intake, vibrant, energetic intrapreneurs in the organizations, the synergetic work-culture is taking place. Herein, the other meter like strong communication, dynamic six-sigma type leadership (Welch, Larry Bossidy, Boss Galvin etc.) and decision-making, are direfential and has been taken as a constant factor.

It has been further observed that differentiation has been found to people who are energetic and extroverted and under-values people are shy and introverted, even if they are talented. This working, i.e. 2020 with more candidness, more candour (transparency), passionate regardour and professionalism certainly takes an organization to higher ts. Six-sigma leadership dimensions: level of attention, charisma enging the status quo, and exemplary leadership imparts this tiation working system a desired upshot for accomplishing the nalional excellence. The suggested differentiation model is shown in 8.3.

**Experiential Learning Model: Power of Full Engagement and EQ Manifestations**

After four, some initial conceptual model have been depicted, wherein their various ingredients have been highlighted. Also, in Chapter various manifestations of intelligence and emotional quotients (EQ) on Goleman (1998) Covey (2004), Pathak (2002) have been

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discussed. As an outcome of the study, a experiential model is suggested (refer Figure 8.4) which harnesses a synergetic work culture into an amazingly powerful 'Organizational Excellence' work culture.'

![Diagram showing the differentiation model](image)

Figure 8.3: Differentiation Model: Modification to Pareto Law (30:50:20)

The `execution quotient (XQ)` suggested by Covey (2004) and a work culture propagated by Bossidy and Ram Charan (2002) as `discipline of execution` certainly, amply supports the proposed model. Once the `power of full engagement` and `EQ Manifestations` are combined with EQM
Experiential Quality Management) and 'smart-design culture' and Evolvability—it gets further upshot with experience-centric HR performance drivers into achieving dominant competitive advantages leading a firm to organizational excellence'. The proposed model has been depicted in Figure 8.4. The model further combines the experiential heterogeneity, variability, quality of execution and leverages these to core competencies all around the globe. Connecting 'purpose' to 'spiritually' may probably impart the higher upshot towards passionate work-culture.

Figure 8.4: Experiential Learning Model of Organizational Excellence (Combining Power of Full Engagement and EQ Manifestation)
35.3 Total Organizational Excellence Model

Throughput, the entire work and its further development, it has been understand that the three main ingredients—rather thrust points—which are the common constant factors for any organization are: leadership (rather six sigma type); strong communication; and decision-making. These, parameters should be inherent, inbuilt and incessant in any organization. Keeping this as a constant factor and developing a suitable strategy for the organizations combining with six evolved propositions, a linkage map framework for `Total Organizational Excellence’ has been arrived at and presented in this work vide Figure 8.5.

As will be evident from the linkage map, in modern business scenario, firm or organization has to co-create values with customers continuously and then find out constraints and solve them. Then work with `evolvability design norms’ which is embedded intelligence in the design of the product—variability to adopt changes desired by the customers and apply modifications there of. The EQM (Experience Quality Management) has entered in place of traditional TQM (Total Quality Management) today, which means combining heterogeneity—in other words, variability—with quality of execution. We can further observe that the same consumer who demands a unique, personalized experience also demands responsiveness, speed,
reliability and cross-channel consistency. The solution lies in finding out an array of resources to create a multitude of possible experiences while also maintaining the quality of each of the underlying sub-processes. It also, simply demands an ‘experience-network’. It is a vast subject and possibly, here we cannot discuss the details as it is beyond the scope of the study.

It will be observed herein, that, the total organizational excellence model, primarily deals with people, strategy and their performance and links their interconnected vital activities (which are rather critical) are more central to HR Architecture and has to be given due weightage. Also, we observe that the quality of products, services, and processes are necessary, but not sufficient determinants of the Quality of Experience (QOE). For these we have to accommodate heterogeneity of users or consumer’s experience, variability in experiences, with identical products and services (experience network). Thus, today we have to learn to live in ‘experiential environments’.

Finally, the whole game is so simple-translating the strategy into action-plan for achieving the organizational excellence.
Figure 8.5: A Linkage Map-Framework of Total Organizational Excellence

Note: Communication, leadership, and decision-making has been taken as 'constant factors' for every lab/organization, which must be in-built, inherent and incessant all the time.


8.6 Concluding Remarks

In this chapter, synthesis of qualitative analysis, case-studies and empirical studies have been made under all the six identified propositions derived. A linkage map of various vital variables/ingredients accruing out of the study has been drawn schematically and they have been suitably presented. The dominant variables itself are interactive and inter-dependent mostly on each other and emphasize the success story of the study.

A causal flow diagram also has been drawn for a typical representative project execution of a DRDO lab of a product, right from the feasibility study to development of product and its introduction into the service as well as further appreciating post-development product improvement follow up activities.

Finally, analytical study has culminated into three successful work-culture enhancement models for achieving organizational excellence. These are:

(a) Experiential Learning mode: Based on Power of Full Engagement and EQ Manifestations.


(c) A linkage Model framework of total Organizational Excellence.
Eventually, the most important HR Architecture and its characteristics performance drivers require more candidness, more candour, professionalism and decidedly passionate work-culture for taking up any organization to higher heights.