Training Evaluation and Monitoring Framework for Skill Development Programs

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INTRODUCTION

Quality frameworks are designed to report to all internal and external stakeholders in an organisation the state and the path to achieve continuous improvement by providing a connection between outcomes and the process by which outcomes are achieved (Frazier, A. 1997). To this effect the Training evaluation and monitoring frameworks is a is both a mind-set and a set of practical activities- an attitude of mind as well as a method of promoting continuous improvement that is loosely based on Total Quality Management practices (Herman, J., and j. L. Herman. 1994).

The skilling landscape has a multitude of stakeholders and different stakeholders with different interests and expectations perceive quality in differently. So it is important to choose indicators used to measure quality basis relative priorities. In this aspect, India is expected to be home to a skilled workforce of 500 million by 2022 with about bout 12 million persons joining the workforce every year. This talent pool needs to be adequately skilled. The current pool of skilled talent is around 3.4 million (FICCI-ICRA Report, 20101). The National Skill Development Corporation (NSDC) has been set up under Public-PrivatePartnership (PPP) mode as a Section-25 Company under the Ministry of Finance to provide viability gap funding and coordinate private sector initiatives. Indian industry holds 51% stake and Indian Government holds 49% stake. NSDC has been mandated by the Indian Government to "catalyse" (advocate, create, fund, facilitate, and incentivize) skill development in India. As skill development in a large scale takes off, implementing agencies (government, vocational training providers) face with challenges that come up at every segment of the skill development value chain (Fig).
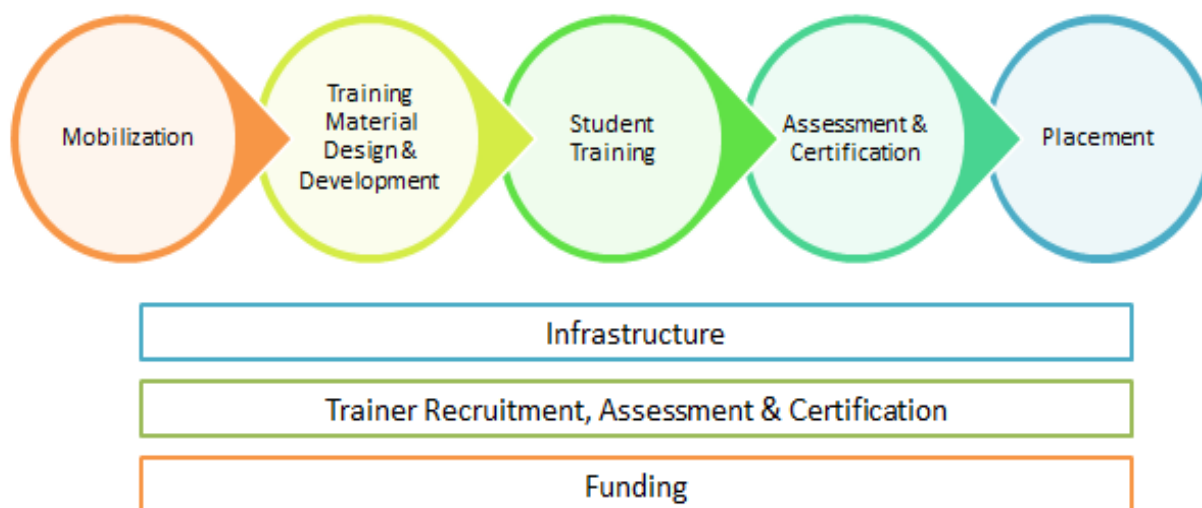
Figure: Skill Development Value Chain and Challenges

OBJECTIVE

At a higher and broader level a quality framework is used to promote the quality of the training processes and its outputs and synchronise them to the national standards leading to the development and implementation of common standards, sharing of good practices for training and create a method to report the quality with ease.

To achieve the above stated objectives we devised a quality management framework which has methods and tools that can be used for regular monitoring and evaluation of the quality of training across various schemes and over time.

The National Skills Development Corporation provides guidance to its training partners and implementing agencies on the quality management and monitoring can flourish through Guidelines for Accreditation, Affiliation and Continuous Monitoring of Training Centres for the Skill Ecosystem.
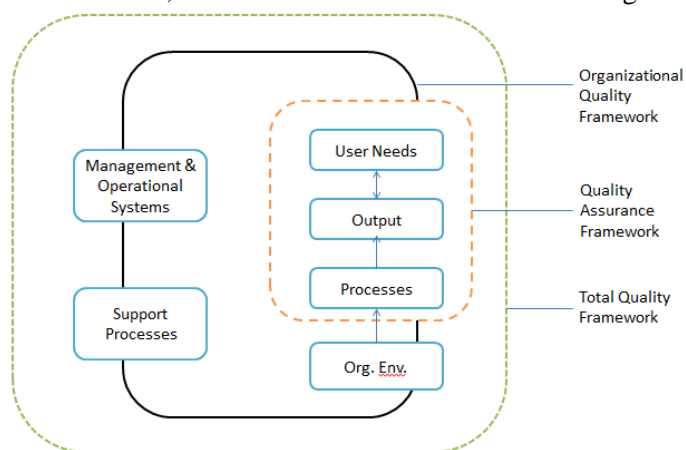

Figure: Quality frameworks and their interrelationship

Empower Pragati's Training Quality Management Framework or **Training Evaluation and Monitoring (TEAM)** is a set of quality assurance procedures to ensure that the training delivered in its skill centres is defect free, adheres to quality standards and processes, and meets or exceeds the required technical and performance requirements.

The challenges and quality metrics taken into consideration in this study are restricted to the three levels of quality management in education have been previously described by Herman and Herman (1994). These are:

- The management processes, including strategic planning, recruitment, staff development, resources
- The alignment of the pedagogy and assessment methodology
- The teaching quality, wherein students are recognized as both customer and workers in the training system and self-evaluation by trainers and administrators is key to evaluation of the learning process and acceptance of responsibility.
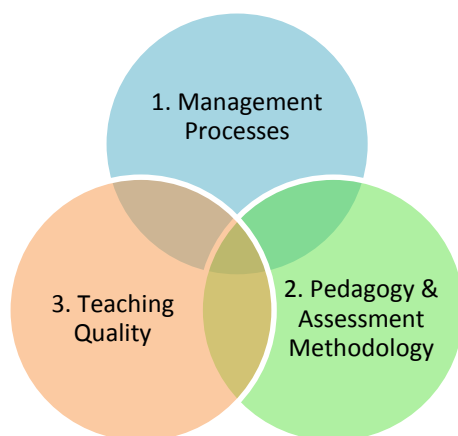
Figure: The three levels of quality management in education

METHODOLOGY

Total Quality Management (TQM) models works on a premise of systematic, holistic approaches to assess quality. The strategic core of all major TQM models is continuous improvement of the organisation as a whole including management systems and support processes (Sallis, . The most important point of reference is the use made of the final output (user needs). Output characteristics and the design of the processes have to be streamlined according to the requirements in terms of quality, time and cost. TQM also includes other factors which determine output and processes indirectly, such as leadership (including policy and also cultural aspects), management systems (e. g. planning) and support processes (financial management, human resource management).

Empower Pragati was one amongst the first set of companies to become funded partners of National Skill Development Corporation (NSDC) in 2010. In the last 8 years we have skill trained over 2.6 lakh youth through implementation large scale government projects like PMKVY, DDU-GKY, NSQF and CSR. We work with vulnerable youth, women, specially-abled, school/college drop-outs through 28 PMKKs operational across 6 states, DDU-GKY projects in 5 states and NSQF projects in 14 states.

Basis this experience and the guidance provided by NSDC (Guidelines for Accreditation, Affiliation and Continuous Monitoring of Training Centres for the Skill Ecosystem, 2017) we devised a quality framework; **Training Evaluation and Monitoring (TEAM).** This Quality Control Framework is designed to create synergies between the skill development initiatives undertaken by the Government of India and the stakeholders of the skill ecosystem, in particular.

Competency based training imparted at the PMKK and DDUGKY demands a Training Quality Management Framework to maintain the standards required and quality skill development training, which is the ultimate goal. The framework that has evolved includes:

- Regulating bodies – NSDC & SSC
- Trainer competencies
- Student competencies
- Certification of Trainer and Student
- Internal Empower Pragati created and scored Assessments
- External SSC created and scored Assessments

Effective methods and procedures for the assessment of all these aspects are key factors of the quality framework. Furthermore, the tools and methods for assessment have to be fully integrated. The quality framework builds heavily on the results from data quality measurement which should provide input to strategic planning and improvement actions.

Defining Criteria and Measures:

The application of quality assessment methods always requires some basic information including a documentation system giving access to key characteristics of the processes and outputs under consideration. Furthermore, quality assessment methods require an (internal or external) standard as a reference against which the assessment can be carried out.

A careful consideration and analysis of past data was made before formulating each indicator and how it was to be measured. The relevance of monitoring the number of non-compliances was questioned if these were not anchored to a measurable outcome. Care was also taken to not focus too much on effectiveness and only on quantitative result indicators. Thus to create a robust framework, there was a need to stand back from the constraints of the logical framework, which is heavily oriented towards a results-based approach, and integrate elements of total quality management throughout the training cycle (Sunny Guptan. 2017).

These 3 groups of criteria: impact and results criteria, structure criteria, and process criteria, were used together define the quality framework .

- **Structure Criteria**: which are the resources made available for training: Training center infrastructure, availability of training kits, books, teaching aids, equipment and allocation of certified trainers.
- **Process Criteria**: which are compliance to Empower Way of Training Delivery and compliance to Operational processes and other professional good practices.
- **Results:** which are results of compliance to structure and processes and results is good student attendance, student assessment results, placement and student satisfaction scores.

TEAM is designed to have three elements: self-assessment report, call validation and training delivery observation. The criteria have been designed to include diverse delivery provision and forms of excellence including; content of the curriculum, pedagogical methods applied and procedures to assess student performance.

Figure: Elements of TEAM

Self Assessment Report (SAR):

In the first layer, detailed information obtained from measurement and documentation was selected and structured to become meaningful for quality assessment. For this purpose, methods such as key process variables (e.g. resources used, time used, process deviation error rates and response), quality indicators (e.g. revision size, coefficient of variation, response rates) and user surveys are used.

The SAR is a periodic report that is filled and reported by the Trainers and the Center Managers.

Training Delivery Observation (TDO):

This training delivery observation sheet provides a clear review document for ensuring trainers are delivering training as required. It provides a checklist for general trainer competencies as well as ensuring the trainer is covering the objectives of the training. Additionally, it captures the environmental factors such as, the facilities, aids and conformance to Empower Pragati's Training Methodology.

TDO is carried out by a set of trained observers. Each observation is captured in a TDO format and analysed.

Call Validation (CV):

Calls are directly placed to the end users, our students. These calls are telephonic surveys and designed to directly measure user perception of specific matters related to training delivery.

Output, Star Rating and Corrective Action Planning

Post TEAM completion, each trainer is provided with action plans and this is accompanied by the formal agreement with the Center Manager to implement the same. The objective of sharing the action plan is to help the Trainers and the local management and operations at the center level improve.

Each action plan includes the following key information:

- The observed gap
- The specific action to be initiated to address the recommendation and suggested resources to be used to implement it

• A specific target completion date and identify the responsible party or manager

Each center is assigned as Star Rating based on the three elements of TEAM. Grading plays a pivotal role in benchmarking the training quality across centers. More importantly, it allows the management to compare the training centers sand identifying the training centers which are incorporating best practices. This also promotes a healthy competition between the Training Centers.

Grade Structure

Percentage of Scores	Grade
85-100 %	5 Star
70- 84 %	4 Star
55 -69 %	3 Star
40 -54 %	2 Star
Below 40 %	1 Star

Table NSDC Recommended Star Rating

Dashboard

The Training & Quality Team compiles a Quality Dashboard. The Quality dashboard is an effective tool to get an overview of progress occurring in the training, capacity development, and other areas as they relate to Training Delivery. The management uses the Quality dashboard and its trends to learn and make decisions that support team goals around training quality.

Like any other dynamic framework TEAM is reviewed and amended periodically to build more effectiveness. Stakeholders, such as non-government funded projects.

As delivery is constantly being evaluated, continuous monitoring greatly improves the level of situational awareness for Trainers and Center Managers.

FINDINGS

As a pilot, the TEAM Framework was implemented across 12 PMKK and 1 DDUGKY center. The framework was flexible enough to lend itself to customization and criteria were added/ or delete less easily agreed upon criteria by different

In testimony, we report a 40% improvement in the delivery posture after implementing TEAM. Pedagogical innovation, better trainer development, intense use of tools/equipment and technology are some of the outcomes that have emerged.   This is evidenced by 2 case studies:

CASE 1 – Process Improvement

Challenge

Inability of the Trainers to implement all elements, as defined by Empower Pragati Training Methodology.

How TEAM Helped

Monthly individual Trainer and Center wise scores were published via a dashboard. Each trainer received actionable feedback that was linked to the Structure or Process Criteria defined earlier. Inability to organize Industrial Visits emerged as a common problem. Unhappy management, stressed trainers, missed deadlines, and increased costs were just some of the problems that this dysfunctional processes had created

Job Role	1. How often does the trainer report to center and punch on time?	2. How often does the trainer participate in staff meetings?	3. Does the trainer adhere to session plans while teaching?	4. How often does the trainer use projector while teaching?	5. How many leaves has the trainer taken in last 30 days?	6. Are domain charts displayed in the classroom?	7. Does the trainer adhere to session plans including Hello English App, IT and employabilit	8. Are lab equipments, including software in working conditions in labs?	9. Has an OJT been organized?	10. Is the feedback form circulated and filled by the students?	11. Are projectors functional in all classes?	12. Are Trainers/Guest faculty from industry invited to give industry orientation the	13. Are all computers working or not?	14. Have action plans been implemented for all the trainers?
CCTV Installation Technician	Always on time	Always	Slippage by 1	Mostly	2	More than 4	Slippage by 3-4	All working	No	Yes	Yes	Yes	Yes	Yes
Retail Trainee Associate	Always on time	Always	Slippage by 1	Always	None	More than 4	Slippage by 1	All working	No	Yes	Yes	Yes	Yes	Yes
Handset Repair Engineer	Always on time	Always	Slippage by 1	Mostly	None	4	Slippage by 3-4	All working	No	Yes	Yes	Yes	Yes	Yes
Domestic IT Helpdesk	Late 3 times in	Always	No slippage	Mostly	3 to 4	4	Slippage by 3-4	Most of them	No	Yes	Yes	No	No	Yes
Beauty Therapist	Late 3 times in	Always	Slippage by 1	Mostly	None	2 to 3	Slippage by 1	All working	No	Yes	Yes	No	Yes	Yes
Front Office cum Receptionist	Always on time	Mostly	No slippage	Mostly	2	None	No slippage	All working	No	No	Yes	Yes	Yes	Not applicable
Courier Delivery Executive	Always on time	Always	Slippage by 1	Sometimes	None	More than 4	Slippage by 1	All working	No	Yes	Yes	Yes	Yes	Yes
Warehouse Packer	Always on time	Always	Slippage by 1	Mostly	None	More than 4	Slippage by 1	All working	No	Yes	Yes	Yes	Yes	Yes
Retail Trainee Associate	Always on time	Always	Slippage by 3-4	Sometimes	3 to 4	More than 4	Slippage by 3-4	Most of them	No	Yes	No	No	No	Yes
F&B Service Trainee	Always on time	Always	No slippage	Mostly	None	None	Slippage by 1	All working	No	No	Yes	No	Yes	Yes
Field Technician - Computing	Always on time	Always	Slippage by 1	Always	2	More than 4	Slippage by 1	All working	No	No	Yes	No	Yes	Yes
CRM Domestic Non voice	Always on time	Always	Slippage by 1	Always	None	More than 4	No slippage	All working	No	No	Yes	No	Yes	Yes
Pressman	Always before	Always	Slippage by 1	Always	2	More than 4	Slippage by 3-4	All working	No	Yes	Yes	No	Yes	Yes
Pressman	Always before	Always	Slippage by 3-4	Sometimes	None	More than 4	Slippage by 3-4	All working	No	Yes	Yes	No	Yes	Yes

Figure: A Sample Data Set highlighting the issue of OJT

A root cause analysis was conducted and a pattern emerged. The problem was more severe as the centers are usually located in semi-rural and rural areas.

Results

TEAM allowed the Trainers to highlight an issue that were facing and seek a solution in a systematic manner. The challenge of inability to organize industrial visits was taken up and driven centrally by the Placement Team at the HO. Post which today there are several Letters of Understanding are signed with job-role specific and relevant industrial partners.

Leads that are now passed on to the Trainers much ahead of time. Students are given in-time exposure to the industry that not only motivates them but directly impacts the attendance, helps control drop out rates and placements.

CASE 2 –Use of Reflective Practice by Trainers

Challenge

For most of the Trainers, engaging in a review of teaching activities was neither habitual and often unsystematic. The complexity of teaching requires Trainers to question their practices for their own professional development in order to improve and to finally have a positive impact on student performance. Student attendance for some semi-technical courses, such as DTH Setup Box Installer & Service Technician, were the most affected, especially in wheat harvesting season.

How TEAM Helped

Monthly individual Trainer and Center wise scores were published via a dashboard. Each trainer received actionable feedback that was linked to the Structure or Process Criteria defined earlier.

Call Validation-1 Report				
	Centre Name –		Successful calls	45
	Total Students	100	Taking Classes Regu	28
	Feedback Received	45	Not Taking Classes P	17
	Not Contactable	33		
	Invalid Numbers	17		
	Drop Out	9		
	1. What are the mediums used by trainer while teaching in class?			
	None of the above	0		
	PPT and Whiteboard	20		
	Videos	2		
	Videos and Whiteboard	0		
	Whiteboard	8		
	Total	30		
	2. Are class tests taken?			
	No	Yes	Grand Total	
	13	30	43	

Figure: A Sample Call validation Report highlighting the low regular attendance rate and training aids

Being reflective will also made sure that the Trainers develop a wider range of skills and find new ways to teach. New innovative and new methods of DTH Dish installation such as back flip technology were introduced and demonstrated to students.

Results

Reflective practice is the ability to reflect on an action so as to engage in a process of continuous learning.

A glimpse of back flip technology used by trainees of DTH set top box installer/service technician batch-6 **in this technology we can track signal at roof surface without mounting dish antenna at roof/wall/balcony simply we used dish antenna at flat position on roof & rotate it's we saw that mostly signal (channel) tracked that's also viewed by us on LED (with proper connections** this is technology proceed by Trainee-Kuldeep Kumar in guidelines of me & I taught him (Kuldeep) about this technology yesterday so today he followed this technology with other trainees ......

16:56

This helped develop Trainer confidence in the classroom as they found the innovative ways to deliver knowledge of a subject. This directly impacted student engagement and teaching practices. When Trainers become more aware of students' preferred learning styles and learning becomes more tailored to their needs and students tend to be more curious and are equipped to explore more.

CONCLUSION

Our implementation of the TEAM Quality Framework and its stakeholders developed a set of well researched criteria. These criterial emphasize learning outcomes, assessment, and continuous improvement along with detailed curricular specifications. (Dylan William, Clare Lee, Christine Harrison & Paul Black, 2010). The case studies in this paper represent data on student learning experiences and process improvements that showing reliable changes in the quality of the student learning and teaching experiences.

REFERENCES

1. Sallis, E. 2014. Total quality management in education. Routedge Taylor& Francis Group

2. NSDC, 2017.Guidelines for Accreditation, Affiliation and Continuous Monitoring of Training Centres for the Skill Ecosystem.
   http://msde.gov.in/assets/images/pmkvy/Guidelines%20for%20Skill%20Ecosystem.pdf
3. Frazier, A. 1997. A roadmap for quality transformation in education. Boca Raton, Fla.:St. Lucie Press
4. Herman, J., and j. L. Herman. 1994. Education quality management: Effective schools through systematic change. Lancaster, Pa.: Technomic Publication Co.
5. FICCI and ICRS Report, 2010 The skill development landscape in India and implementing quality skills training
6. Dylan William, Clare Lee, Christine Harrison & Paul Black, 2010 Teacher Developing Assessment for Learning: Impact on student achievement, Assessment in Education, Vol.11 No.1
7. Sunny Guptan. 2017. Bridging the Skills Gap: Technology - An enabler for skill-development programs.