Strategic Analysis of In-Service Training Processes at Education Training and Research Unit-Ministry of Health-Sri Lanka

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ABSTRACT

The Education, Training and Research (ET&R) Unit of the Ministry of Health is the focal point of facilitation, the central agency of monitoring and evaluation and the principal provider of technical expertise in the education, training and research spheres in the Sri Lankan health sector. There are three directorates under the DDG; ET&R. The unit is responsible for capacity-building the health workforce through post-basic and in-service training programs (ISTP). ET&R Unit itself regularly carries out in-service training programs for different staff categories based on the requests made by the heads of the institutions and professional organizations. The objective of the case study was to evaluate the current IST process practised by the ET&R Unit. Key Informant Interviews (KIIs), Focus Group Discussions (FGD), online-based Google forms and Document reviews were carried out as data-collecting methods. Process mapping, Ishikawa root cause analysis, Pareto analysis and priority matrix were the theories and tools used. The issues identified were the Unavailability of permanent leadership at the ET&R Unit in the Ministry of Health, Inadequate Fund allocation from GOSL, No proper TNA method practised, Unavailability of a proper post-ISTP follow-up evaluation system, Less reliable progress reports produced by the relevant focal points, Not aligned with IST Annual Action Plan (ISTAP), No proper prioritization is carried out, Delayed submission of proposals by IST focal points, MSOO are not included in ISTP, Approval delayed by the ET&R Unit. The prioritized problem was the unavailability of a proper post-ISTP follow-up evaluation system. According to the Pareto analysis, vital root causes were the unavailability of a Standard Evaluation tool, not using a standard TNA tool and the Lack of interest of the healthcare staff. The recommendation is to introduce New World Kirkpatrick's Four Levels of Training Evaluation model at ET&R Unit-Ministry of Health-Sri Lanka.

Keywords: In-service training processes, education, training, research

INTRODUCTION

The Education, Training and Research Unit (ET&R) is one of the key units of the Ministry of Health (MoH) which is headed by the Deputy Director General (DDG), ET&R. There are three directorates under the DDG, ET&R as, Director training, Director Nursing Education and Director Research. This unit is the focal point in policy formulation, providing technical guidance related to training and also coordinating basic training programs for all health staff categories except for basic degree programs for Medical Officers and Dental Surgeons. Furthermore, the unit is responsible for capacity-building the health workforce through post-basic and in-service training programs (ISTP). Moreover, there are 18 Nursing Training Schools (NTS), 16 schools of Professions Supplementary to Medicine (PSM) and Paramedical Services (PMS) and 8 Regional Training Centres(RTC) under the ET&R Unit. In addition, the unit develops policies and capacity in research related to health and provides financial allowances to the relevant officers for carrying out workplace-based research as well as funds for ISTP. Hence, promoting and assisting Health System Researches (HSR) are some of the main functions of the ET&R unit. The health system is strengthened by health system research to achieve cost-effective treatment for the needy and better global health status. However, significant confusion and ambiguity lie in terms of boundaries, features, methods and definitions. Production, translation, reproduction and implementation are different barriers which add to the complexity of the health research system. Other challenges include comparative, generalizability, transferability, applicability, standards, community diversity and priority-setting. We can support health systems research by taking it as a field of scientific endeavour that has shared a language, cross-jurisdictional learning, interdisciplinary approaches and international society. We can also strengthen national capacity at the individual, national and organizational levels. We can also take health system research as a major health system function. By arresting such issues and barriers health system research can be supported to meet global health challenges and outcomes (Glandon *et al.*, 2019). Furthermore, the ET&R Unit coordinates with the Ceylon Medical College Council, University Grants Commission and other relevant academic and professional institutions and organizations in Sri Lanka intending to strengthen the human resource capacity of the health sector.

IN-SERVICE TRAINING PROGRAMS (ISTP)

ET&R Unit itself regularly carries out in-service training programs for different staff categories based on the requests made by the heads of the institutions and professional organizations.ISTPs are conducted throughout the year, aiming to improve the competencies of healthcare workers in almost every government healthcare institution in Sri Lanka. Most of the programs are steered by the institutions themselves and cover diverse staff categories (Consultants to Healthcare Assistants) and themes are Technical, Clinical and Soft skills. Funding for these programs comes from various sources. There are two types of IST namely individual and group. The key funding sources are the ET&R Unit, Health Promotion Bureau (HPB), Family Health Bureau (FHB), Provincial Specific Development Grants (PSDG), PSSP and ADB (HSEP). Annually the government of Sri Lanka (GOSL) allocates a percentage of expenditure for ISTPs.For the year 2018; it was 125 million and 50 million for the year 2023. However, there are concerns that these programs carried out in healthcare institutions might not have the expected standard and quality. Therefore, it does not yield the expected outcomes (Source: ET&R, 2022)

OBJECTIVES OF THE STUDY

1. To evaluate the current IST processes practised by the ET&R Unit, MoH, Sri Lanka

2. To identify the areas to be improved in the current IST processes at ET&R Unit

3. To propose recommendations to improve the current IST processes at the ET&R Unit

METHODOLOGY

➢ Key Informant Interviews (KIIs) were carried out with the Director of Training, Director of Research, Director of Nursing Education, Program and Planning Officer (PPO), Development Officers (DOO) and Management Service Officers (MSOO) at the ET&R unit.

➢ Focus Group Discussion (FGD) was conducted with Medical Officers (MOO) at the ET&R unit.

➢ An online Google form was used for twenty randomly selected IST focal points in Sri Lanka.

➢ Document reviews were carried out by the Principal Investigator (PI).

A Problem is defined as a difficulty requiring a solution or a "perceived gap between what it is and what should be".

$$P = [E-A]*C$$

P = Problem

E = Expected situation/performance level

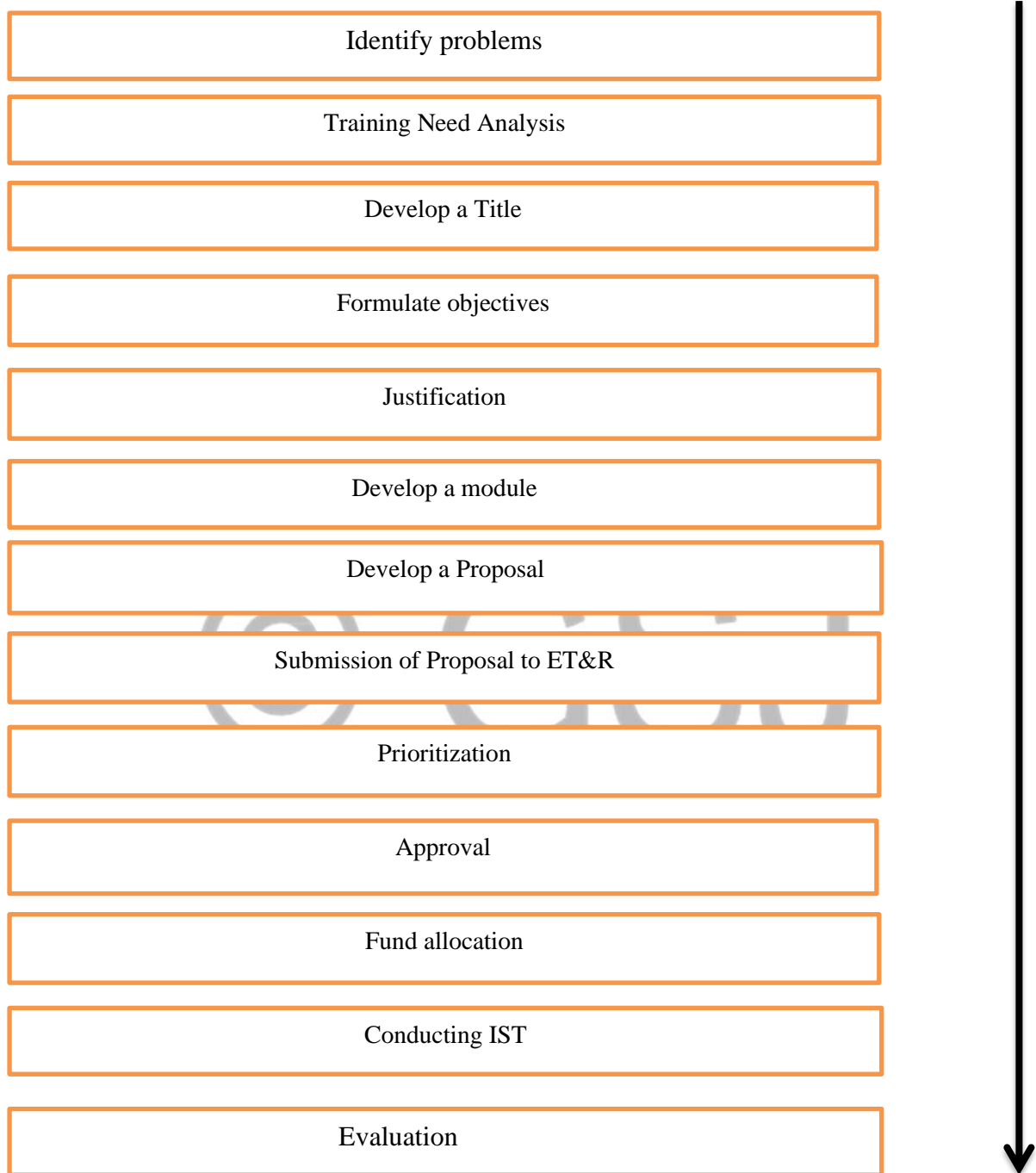A = Actual situation/performance level

C = Concern

First, identify the performance gap and determine what training will successfully address any skills/knowledge/behaviour deficits. Then do the Training Need Identification by TNA.

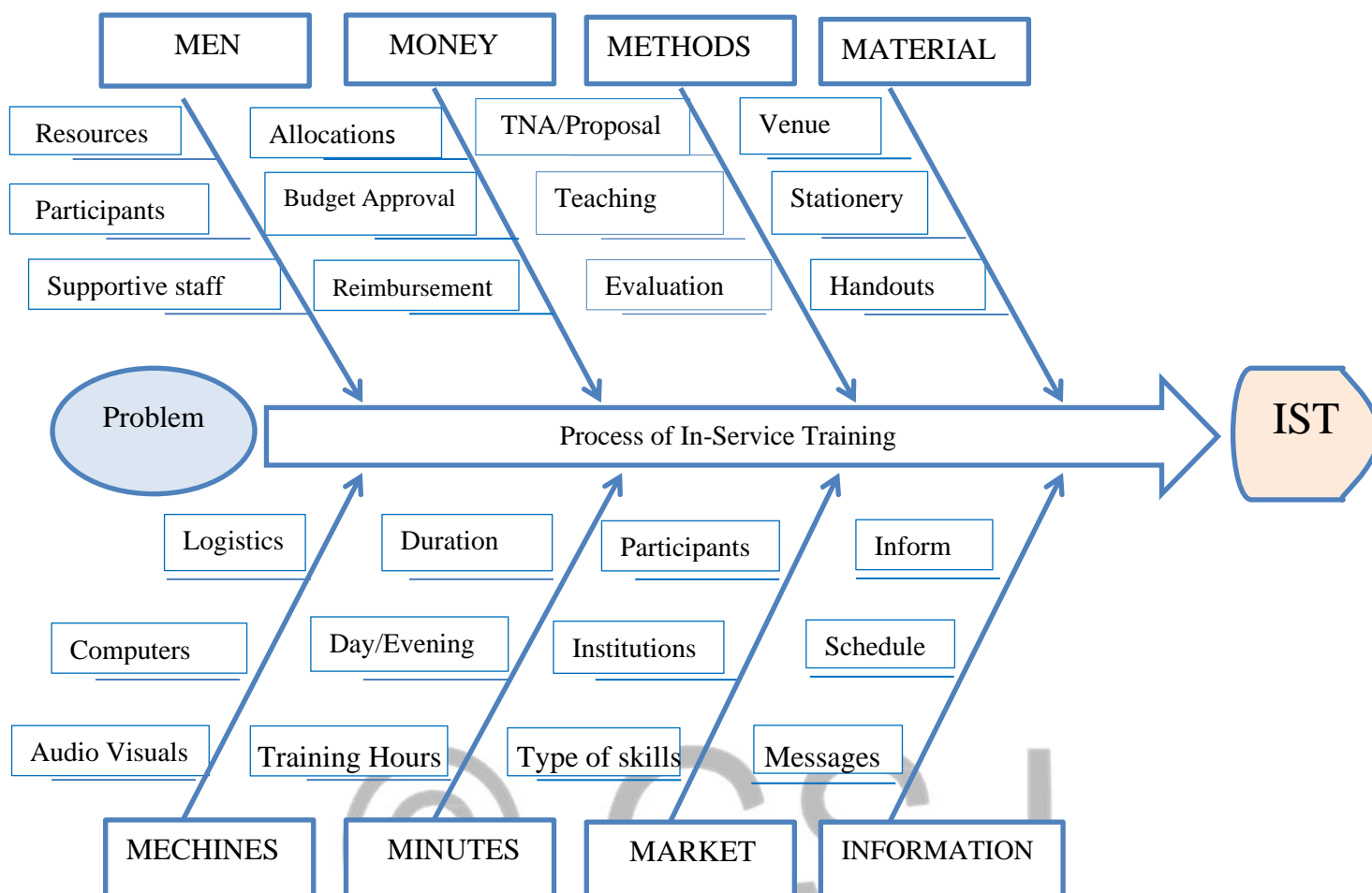Then formulate the Training Objectives which should be SMART

The following Items should be considered;

- What – The Topic and Main Objective
- When – The Agenda
- Who – Resource Personnel, Responsibility, Course Coordinators
- Where – The Venue
- How – Method of Training, Method of Evaluation
- How to Develop a Training Proposal
- Money – Financial Arrangements
- Men – Resource personnel, Participants. Supportive staff, Drivers etc.

- Material –Stationery, Attendance Sheets, Reading material, PowerPoint Handouts , Evaluation formats, Certificates, Venue, Lunch and Refreshments
- Machines – Audio Visual including computers, power supply (including emergency)
- Method – TNA, teaching and Evaluation methods
- Market – Clients – Participants – Select Target Population
- Minutes – Duration, Training hours etc.
- Information – Inform Resource Personnel or participants

Data gathered from KIIs, FGD, Google form and document reviews were compiled into a process mapping and the Ishikawa/Fishbone diagram. They are illustrated below;

Identify problems

Training Need Analysis

Develop a Title

Formulate objectives

Justification

Develop a module

Develop a Proposal

Submission of Proposal to ET&R

Prioritization

Approval

Fund allocation

Conducting IST

Evaluation

Figure 1:In-Service Training process

Figure 2: Analysis of In-Service Training Processes

The following problems were identified related to IST at the ET&R Unit

1. Unavailability of permanent leadership at the ET&R Unit in the Ministry of Health.
2. Inadequate Fund allocation from GOSL.
3. No proper TNA method is practised.
4. Unavailability of a proper post-ISTP follow-up evaluation system
5. Less reliable progress reports are produced by the relevant focal points.
6. Not aligned with IST Annual Action Plan (ISTAP).
7. No proper prioritization is carried out
8. Delayed submission of proposals by IST focal points
9. MSOO are not included in ISTP
10. Approval delayed by the ET&R Unit

These problems were prioritized with the support of three registrars in Medical-Administration and five MOOs at the ET&R Unit concerning the impact of the problem and the practicability to address it.

Tabe1: Priority Matrix for Problem Prioritization for Ineffective IST

	Problem	Number of votes received		Total Votes	Final Priority
		1st Round [Five votes for each of eight members]	2nd Round [Four votes for each of eight members]		
	1. Unavailability of permanent leadership at the ET&R Unit	3	1	4	-
	2. Inadequate Fund allocation from GOSL	3	2	5	-
	3.No proper TNA method is practiced	6	7	13	2
	4. Unavailability of a proper post-ISTP follow-up evaluation system	10	10	20	1
Priority Matrix for Problem Prioritization	5. Less reliable progress reports produced by the relevant focal points	3	3	6	-
	6. Not aligned with IST Annual Action Plan (ISTAP)	4	2	6	-
	7.No proper prioritization is carried out	6	4	10	3
	8. Delayed submission of proposals by IST focal points	2	1	3	-
	9. MSOO are not included in ISTP	2	1	3	-
	10. Approval delayed by the ET&R Unit	1	1	2	-

PROBLEM ANALYSIS

The prioritized problem was the unavailability of a proper post-ISTP follow-up evaluation system. The root causes for it were identified by literature search, KII with relevant stakeholders and brainstorming sessions with the MOO at the ET&R Unit and the other registrars in Medical Administrations.
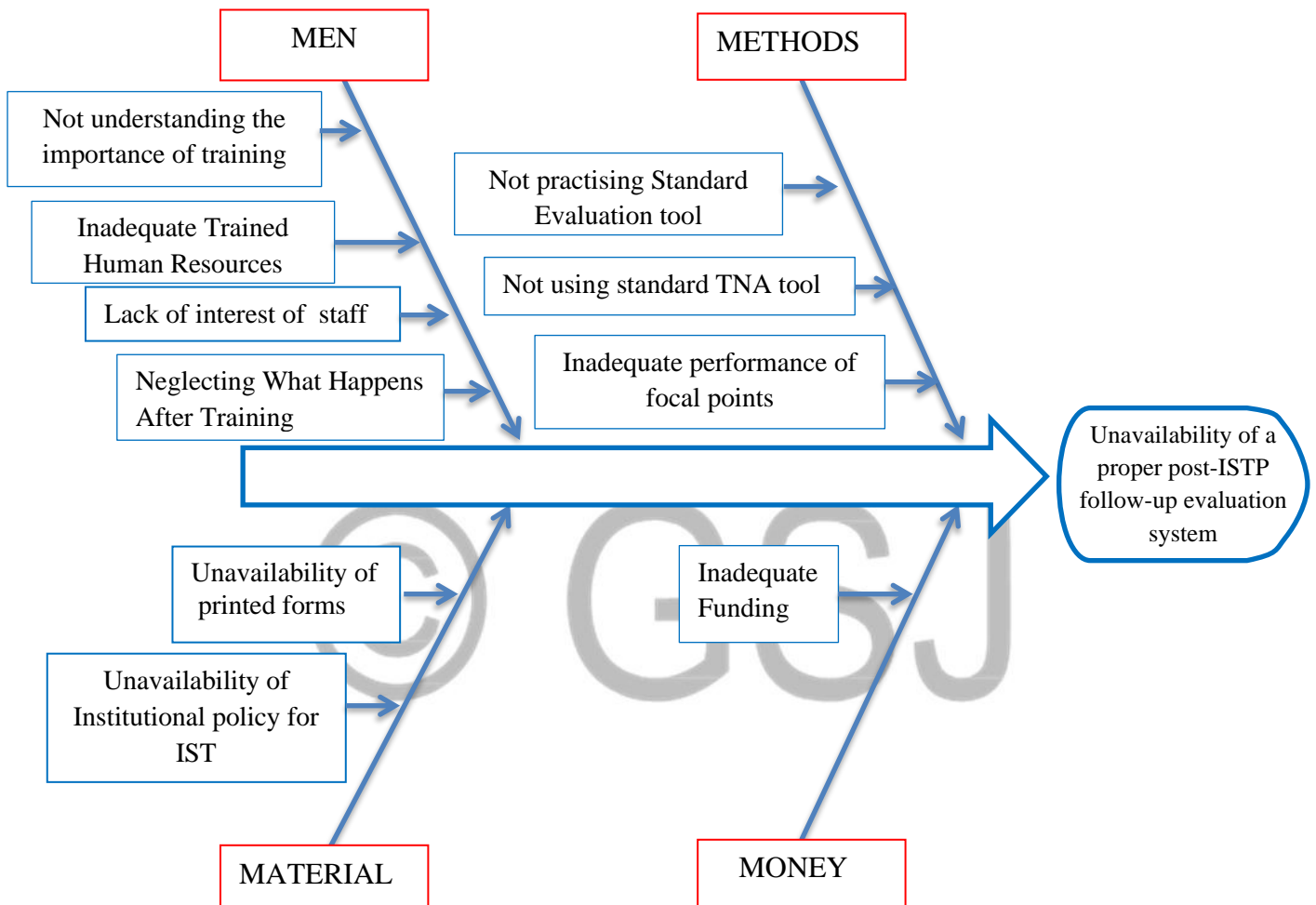
Figure 3: Ishikawa chart-Root cause

These root causes were prioritized considering;

- The feasibility to address - technical, administrative, financial, and practicability.
- The impact of the root cause.
- The time factor to introduce interventions

Tabe 2: Priority Matrix for Root Cause Prioritization for unavailability of a proper post-ISTP follow-up evaluation system

	Root Cause	Number of votes received		Total Votes	Final Priority
		1st Round [Five votes for each of eight members]	2nd Round [Four votes for each of eight members]		
Priority Matrix for Root Cause Prioritization	1. Not practising a Standard Evaluation tool	12	10	22	1
	2. Not using a standard TNA tool	8	7	15	2
	3. Inadequate performance of focal points	4	1	5	-
	4. Inadequate Funding	2	2	4	-
	5. Unavailability of Institutional policy for IST	3	1	4	-
	6. Unavailability of printed forms	1	1	2	-
	7. Neglecting What Happens after training	1	2	3	-
	8. Lack of interest of the healthcare staff	4	4	8	3
	9. Inadequate Trained Human resources	2	1	3	-
	10. Not understanding the importance of training	3	3	6	-

According to the number of votes received by each root cause, they are arranged in descending order. Then cumulative percentages were calculated. Then using Microsoft Excel 365, a Pareto chart was created.
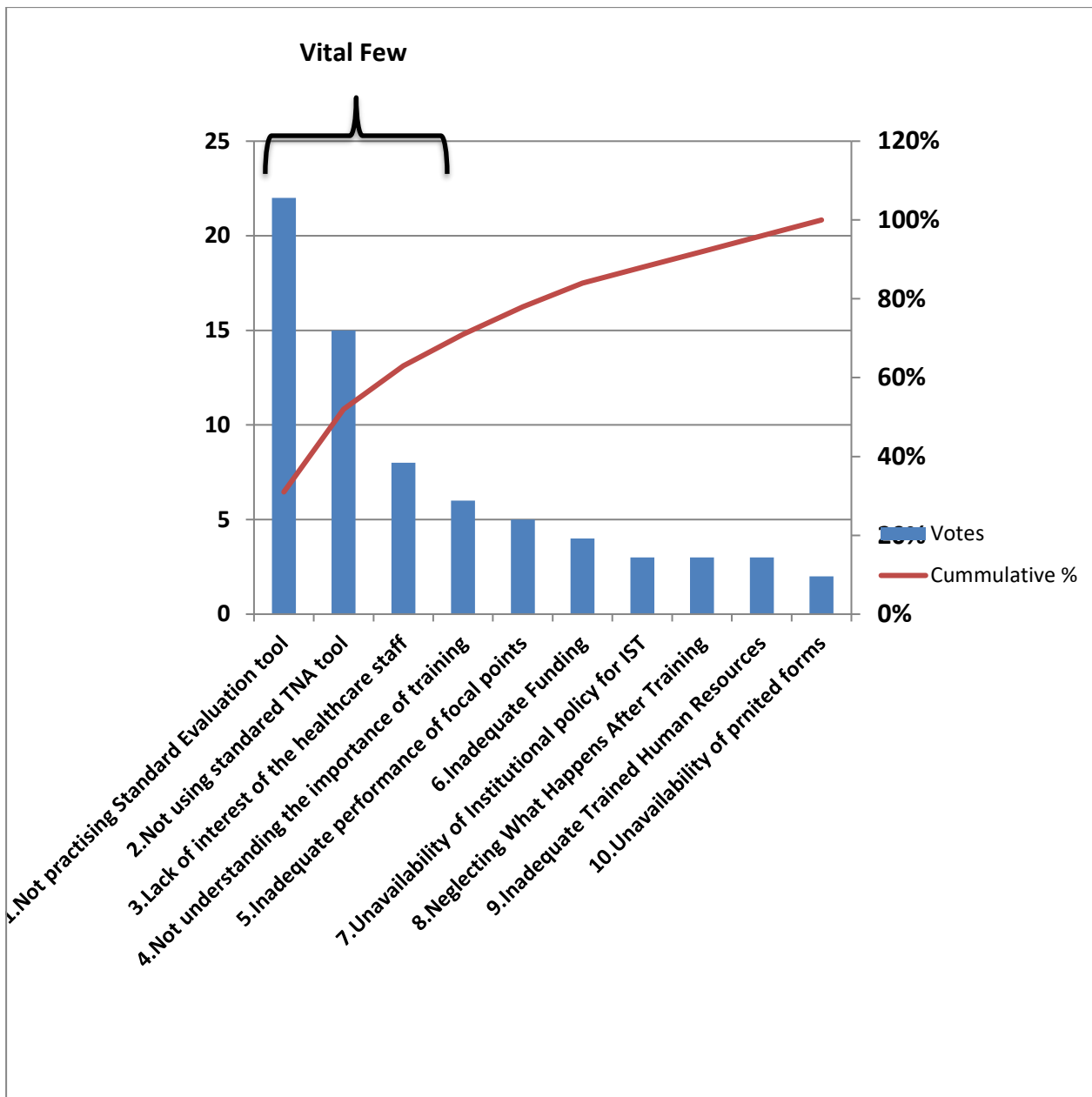
Figure 4: Pareto - analysis to find vital few root causes

PROPOSALS

Solutions for the vital root causes were identified through a literature search and brainstorming sessions. According to the Pareto analysis following are the vital few root causes,

1. Not practicing a Standard Evaluation tool

2. Not using a standard TNA tool

3. Lack of interest of the healthcare staff

The solutions could be;

1. Introduction of the standard post-follow-up evaluation tool.

    The Kirkpatrick Model is a globally recognized method of evaluating the results of training and learning programs. It assesses both formal and informal training methods and rates them against four levels of criteria: reaction, learning, behaviour, and results. The Kirkpatrick model, also known as Kirkpatrick's Four Levels of Training Evaluation, is a key tool for evaluating the efficacy of training within an organization. This model is globally recognized as one of the most effective evaluations of training (EL Hajjar and Alkhanaizi, 2018). The Kirkpatrick model consists of 4 levels: Reaction, learning, behaviour, and results. It can be used to evaluate either formal or informal learning and can be used with any style of training(Markaki *et al.*, 2021).

Figure 5: Basic four Levels of Kirkpatrick model

The Kirkpatrick Model has many advantages that make it an attractive choice for trainers and other business leaders (Kirkpatrick and Kirkpatrick, 2019)

I.   Provides clear evaluative steps to follow.

II. Works with traditional and digital learning programs.

III. Gives Human Resources and business leaders valuable insight into their overall training programs and their impact on business outcomes.

IV. The simple approach is highly flexible and adaptable across industries and applications, making it easy for trainers to implement the model.

2. Introduction of standard TNA tool.

The Hennessy-Hicks Training Needs Analysis Questionnaire has an overall objective pragmatic score of 15 out of 20. According to this objective pragmatic assessment, the Hennessy-Hicks Training Needs Analysis Questionnaire's strengths to include being available in the public domain, having acceptable language, and not requiring training for administration (Hicks, C., & Hennessy, 2011).

3. Strengthen and motivate IST focal points.

4. Train Supervisors to Conduct Follow-Up visits.

RECOMMENDATIONS

The new World Kirkpatrick's Four Levels of Training Evaluation model should be introduced.
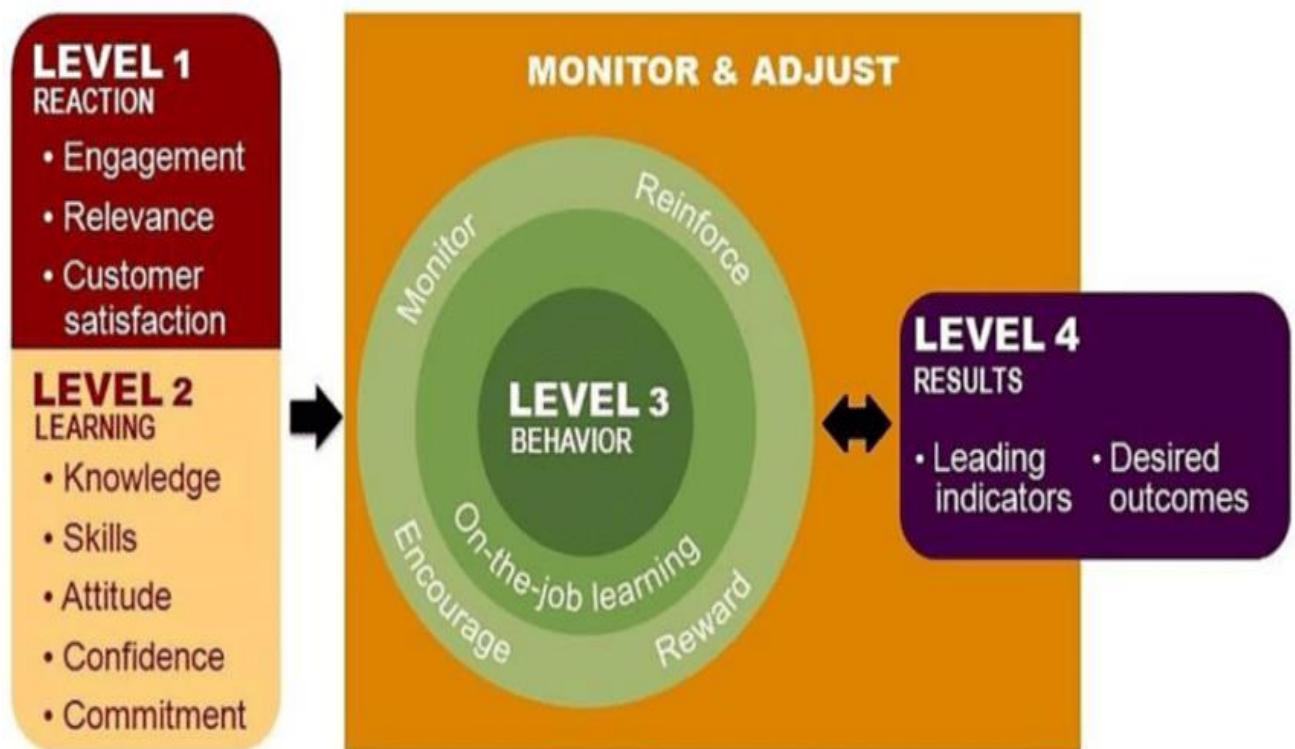
Figure 6: Basic four Levels of New Kirkpatrick's model

IMPLEMENTATION

The implementation of the new World Kirkpatrick's Model could be done through the following strategies.

Strategy	Activities	Responsibility
1. Training of focal points	Introduction of Kirkpatrick's Model-Four levels	HOI, ET&R Unit
2. Ensuring optimal functioning of IST focal point	I. Strengthening of communication with focal points Monitoring and Evaluation of the reporting system. III.Financial allocations	HOI, ET&R Unit, focal points
3. Ensuring sustainability of practice of the Model	I. Employee-satisfaction-surveys Introduction of appropriate reward system.	HOI, ET&R Unit, focal points

CONCLUSION

The prioritized problem was the unavailability of a proper post-ISTP follow-up evaluation system. Despite its age and various limitations, the Kirkpatrick Evaluation Model is still one of the most common training evaluation methods today. The key to using it effectively is to make training evaluation an integral part of your training design from the beginning. By working backwards on the Kirkpatrick Four levels, can develop training initiatives that are effective and impactful and directly tied to measurable outcomes. The recommendation is to introduce New World Kirkpatrick's Four Levels of Training Evaluation model at ET&R Unit-Ministry of Health-Sri Lanka.

REFERENCES

EL Hajjar, S.T. and Alkhanaizi, M.S. (2018) 'Exploring the Factors That Affect Employee Training Effectiveness: A Case Study in Bahrain', *SAGE Open*, 8(2). Available at: https://doi.org/10.1177/2158244018783033.

Glandon, D. *et al.* (2019) 'Strengthening Health System Research: Opportunities, Barriers And Challenges., Indo Am', *Health Policy and Planning*, 6(8), p. 6. Available at: https://doi.org/10.5281/zenodo.2658662.

Hicks, C., & Hennessy, D. (2011) 'Hennessy-Hicks Training Needs Analysis Questionnaire and Manual', *WHO Global Health Workforce Alliance*, pp. 1–59. Available at: http://www.who.int/workforcealliance/knowledge/resources/Hennessy Hicks_trainingneedsquest/en/index.html.

Kirkpatrick, J. and Kirkpatrick, W. (2019) 'An introduction to the new world Kirkpatrick model', *Kirkpatrick Partners*, pp. 1–13. Available at: http://www.kirkpatrickpartners.com/Portals/0/Resources/White Papers/Introduction to the Kirkpatrick New World Model.pdf.

Markaki, A. *et al.* (2021) 'Training needs assessment: tool utilization and global impact', *BMC Medical Education*, 21(1), pp. 1–20. Available at: https://doi.org/10.1186/s12909-021-02748-y.