

Staff Performance Appraisal System as A Tool For Systems Change In Technical Education

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SYNOPSIS : The paper stresses the importance of systems approach to problem-solving in technical education. Since the present system is under steady environmental pressure to improve its performance, planning for change in the system on the long range basis at all levels of functioning - national, regional, state, institute and the class- room level - is essential.

The paper explains how the systems concept could be used to design staff performance appraisal system linking it to staff development & through it the total educational systems development. The concept of system change cycle is introduced here.

INTRODUCTION :

There are atleast three external sources from which the pressure for staff-performance appraisal is increasing. Firstly, the NPE document (10) itself has identified staff-appraisal on continuing basis as one of its major policy statements. Secondly the National Experts Committee on Revision of Pay-scale for Technical Teachers (11) has linked staff performance to better pay scales and improved working conditions. Thirdly, the latest report of Science & Technology Advisory Council to the Prime-minister has unequivocally reported decline of the quality of technical education. Fourthly, with the establishment of AICTE & their emphasis on maintaining the quality of technical education, the need for improving the performance of all staff will grow.

Lessons from the past :

Efforts are already afoot for the last four decades in the Western European Countries

& the USA to evolve techniques for the staff performance appraisal. In this country itself, spasmodic efforts for teacher evaluation are being made in some educational institutions.

TTTIs, which are engaged in the staff-development programmes for the last 20 years, especially for teachers & instructors, have not been successful in improving quality of instruction in the polytechnics.

Reports of the Western research & our own efforts in TTTIs have always pointed to following main reasons for failure to get better performance in the class-room teaching. (6)

a. General assumption exists among policy-makers & teachers themselves that teachers, especially in the tertiary mastery education system, only need to have subject matter mastery. Skills for teaching & management of students' learning are expected to develop through experience.

b. General indifference of technical teachers towards the behavioural sciences & social sciences. These sciences are considered as soft sciences incapable of giving definitive answers to educational problems especially in higher or tertiary education. Similarly, applied subjects like educational planning & management and organisational development & change are not considered as fields of study useful for improvement of educational systems. Solutions to the educational problems are then based on the thumb rules derived solely from past experiences.

c. The concept of 'inservice training for educational systems development' has yet to be understood by educational policy-makers & administrators in a comprehensive way. (5)

While the importance of behavioural science & social sciences in improving teaching and educational management skills is gradually being recognized now in the country, it is the third factor that this paper will attend to in the context of the theme of performance appraisal system for teachers.

Briefly, the staff performance appraisal is closely related to staff development programmes which are linked to the total educational development efforts. The total educational development means simultaneous improvement in the quality of policy-making, administration, curriculum process, teaching & other supporting services like library facilities, guidance & counselling & evaluation techniques etc.

To understand the real meaning of these linkages it is necessary to understand why TTTIs have not been able to make major impact on the polytechnic education system.

With their focus solely on teacher training, TTTIs found that the new knowledge & skills acquired by the trained teachers were not useable in the environment back in their parent departments which have always remained static in terms of policy-making & administrative actions which discouraged all educational innovations. Even the simplest suggestions to use audio-visual aids to support conventional teaching in the class-room could not be implemented because the polytechnics were not geared to develop infrastructure needed for acquisition of hardware, production, storage & retrieval of software, arrangement in the class-room for projection.

Staff performance appraisal to be fruitful needs an environment which can provide motivation & support for better performance & feedback about the impact of innovative practices on students learning.

In short, the staff performance appraisal should be within the total organizational development context which links staff appraisal results to staff development & through this to the total educational system development. (5)

2.0 CONCEPT OF 'SYSTEM CHANGE' & 'STAFF'

Educational system development means improvement in the performance of the entire technical education system (TES). The performance of the TES is said to have improved if the policy-making, administration, curriculum development, teaching, student learning and evaluation at all levels of functioning have correspondingly improved - i.e. National, regional, state, institution and

class-room level (5).

The word 'staff' therefore needs be defined to broadly include policy-makers, administrators, curriculum specialists, teachers & students & certicators & accreditators at all levels - national, regional & state, organisation & individual levels. At the national & regional level, staff includes, Technical Bureau of MHRD, and its regional committee

and branches; at the state level, policy-makers at the MOE & the HODs; and class-room level the teacher & students.

At each of the above mentioned level of operation, every body controls the performance of a system or subsystem or unit according to its scale of operation.

Any system at any level has seven common elements :

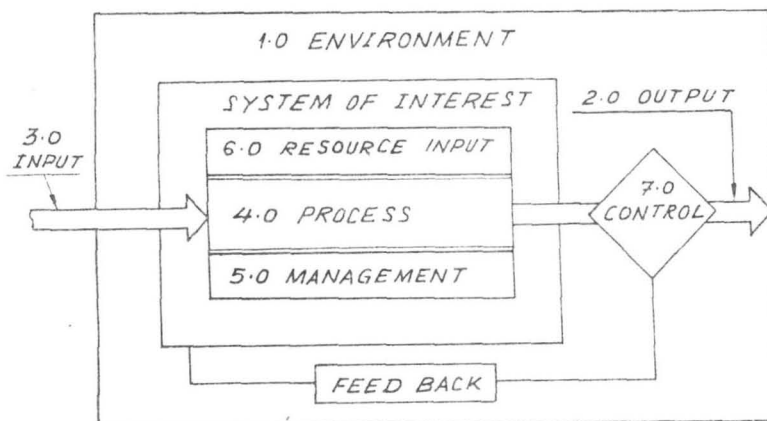


FIG.1 ELEMENTS OF THE SYSTEM

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(7) (Fig 1) Environment, goal/output, input, process, management structures, resource inputs and feedback control system. These elements are inter-related. The output is the goal of the system i.e. product, or services, input (raw material, raw information and raw human beings) to be transformed into an output through a process of transformation (technology); management structure capable of interacting with the environment, policy-making, administration, processing & evaluating the system functioning; resource inputs (comprising human, informational, physical, energy & time & finances) which

are suitably combined to run the process & management; and feedback control system which continuously evaluates process & products & feeds the information into the system for corrective action.

In order to survive, the system needs to be open (7) i.e. sensitive to changing environmental needs & adapts its technology to give output desired by the environment. In the stable environment, all interaction with the environment and procedures. When the environment is turbulent then the system has to change its goal and make corresponding changes in other elements. For example, the

effectiveness of the conventional teaching of technical subjects can be greatly enhanced if the students are taught how to use computers for computational purposes. This skill is needed by the industry.

But to do this, the topic of computer should be included in the curriculum process, instructional material for students prepared, necessary physical facilities for computer centre developed, teachers trained to teach & handle the subject, examination system modified to give adequate weightage to the students skills. To bring about this innovation at the state & national level, the planners will have to plan all strategies carefully, administrators take appropriate action in project planning, budgeting etc.

Staff Appraisal system should be geared to

assess the current capabilities of all these functionaries, identify the gaps in the knowledge skills & attitudes & suggest suitable staff development programmes. Further staff performance appraisal will continue to assess whether the training programme have been effective or not in bringing about system change cycle mentioned above.

It is for bringing about change in the system functioning that the staff performance appraisal needs to be used.

System change is brought about through five steps which form the cycle of development : 1. System analysis 2. System Design 3. System development 4. System implementation & 5. System Evaluation (5) & (3)

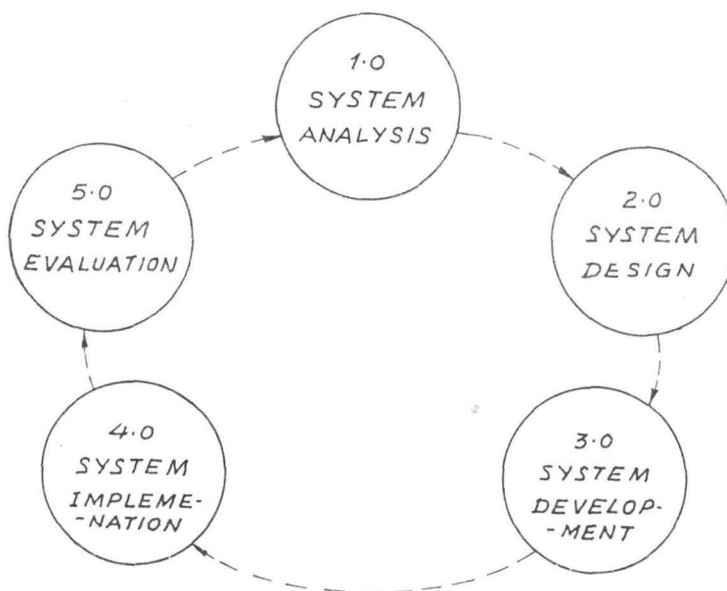


FIG. 2 SYSTEM CHANGE CYCLE

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System analysis is diagnosing the current status of the educational system by examining all its elements mentioned above, their interrelations & identifying gaps in each of these elements.

System Design is the next step in which the current system is redesigned to fill up the gaps & deficiencies which hinder efficient & effective functioning at all levels of the system.

System Development is the stage in which the suitability of all resource inputs - human, informational, physical, time, energy finances are examined & identified and measures taken to attain the new level of functioning envisaged in the redesigned system. This is done by carefully organised staff development, product development & process development programmes.

System Implementation : Once all resource inputs are developed, the system is allowed to function as per the redesigned technology firstly on trial basis, evaluated formatively, successively corrected and finally implemented in its entirety.

System Evaluation : This summative evaluation which takes place say every three years to ensure that the product/services it offers to the society are acceptable to it. If not, the system change cycle is repeated.

If we understand what goes on in each cycle, the jobs required to be done by the system-incharge, his sub-ordinates, peers & superiors could be identified, their additional knowledge, skills & attitude requirement in the redesigned system could be ascertained through staff performance appraisal system & linked to staff development programmes &

reward system.

Since the educational system at the national, regional, state, institutional, departmental, class-room level & student level are all inter-related, the system change cycle must be applied to all these levels simultaneously, since change at any one level bring about corresponding changes in the other levels. THIS IS EXTREMELY IMPORTANT TO UNDERSTAND. THE CONCLUSION IS THAT THE STAFF PERFORMANCE APPRAISAL SHOULD BE DONE AT ALL LEVELS.

3.0 DECIDING WHAT TO EVALUATE

Broadly the Appraisal System should attend to evaluating the cluster of skills, knowledge & attitudes needed to perform every body's functions at all levels effectively & efficiently in each stage of system-development : System analysis, design, development, implementation & evaluation.

Broadly, skills needed in each stages are as under : (3) & (4)

3.1 System Analysis : Skills required are system diagnostic skills consisting of skill in viewing one's field of operations as a system of interest, its relation to supra system and identifying subsystems, identifying need for changing system performance : qualitative or quantitative.

Skills are also needed in measurement & data gathering such as secondary analysis, interviews, self administered questionnaires, standardized instruments, observation, sampling techniques, gathering storing & synthesizing data for identifying gaps in each elements of the system & its impact on the total systems performance & systematically reporting them to the client.

3.2 System Design needs skills in forecasting future trends to determine future systems goal, skill in creative thinking to design a new system at micro, meso & macro-level suitably integrating all elements of the system to produce desired output. System design includes defining new objectives to remove gaps identified during the system analysis stage & then linking these goals/outputs to input specifications, redesign of technology, correspondingly redesigning organisational structure (for policy- making, administration & work related action) modified feedback system for regulation & control & identifying new or additional capability of all resource inputs.

The second important skill is the skill in long range project planning in which strategies for design, development, implementation & evaluation are outlined, with the indication of time frame and budgeting etc.

Development of new design needs continued learning skills (8) to gather new information needed for design state.

3.3 Skills for system development constitute : skills in identifying operations for step by step system development, separation of each operations into functions to be assigned to machines and to human beings, product development & individual staff development technique, methods of integrating them through team training & system training.

In system development, the most important aspect is not merely off-the-job guidance and counselling to enable humanbeings to apply

concepts, principles & core skills in specific job situations. (3)

Development of proper communication system so that interface between supra-system, system & sub-systems (e.g. National level policy making & administration linking with institutional level policy making, administration & educational action) is maintained throughout the development process is one of the major skills.

3.4 System Implementation : This stage requires leadership skills (2) (3). The system in charge needs leadership skill for managing intragroup & intergroup interaction and must be capable of adopting flexible style of management to suit the task complexity & maturity of the subordinates. He must be able to develop group through all its stages of development (Orientation, internal, problem solving, growth & productivity & evaluating formatively the performance) through adoption of various techniques like instrumental, supporting, participative and achievement orientation techniques.

Some of the research skills needed for effective implementation are : action research, ethnographic research, clinical research, evaluative research techniques & operational research.

3.5 System Evaluation : This is the summative evaluation stage in which at regular intervals of two or three years, diagnostic skills are used to find out the status & gaps of the system functioning as a whole to find out whether the redesigned system really gives predicted outcomes visualized in the sys-

tems design stage.

3.5.1. Knowledge base : Skill base mentioned above has to be supported by the scientific knowledge base viz (6) & (14)

1. Behavioural & Social science disciplines like Educational Psychology, Sociology, Anthropology, Systems theory.

2. Applied fields of study like Educational

Technology, Curriculum studies, State level Educational Planning & Management of Technical Education.

3. Organisational Behaviour & performance.

3.5.2 Attitude Base : Typical attitudes needed for effective planned change efforts in any educational system are as follows :

Attitude of staff towards Nature of attitude/value of staff

1. Student focus on students learning cumulatively the required knowledge, skills & attitudes in their chosen field.
2. Himself Open to criticism & ready to correct one's actions & beliefs after rational thinking. Values self directed learning & reflection on practice to learn new knowledge & skills.
3. Course Critical towards the existing curriculum, values equally process & product of curriculum. Keen to increase the social relevance of the curriculum.
4. Colleagues Supportive of other efforts & expects support from others in his own work. Enjoys group work designed for achieving goals.
5. Institutes Conscious of the role of the institute & relates his work to the institutional objectives; participation in all intragroup & intergroup activities.
Deep-approach to problem-solving and not strategie (choosing methods to please superiors & colleagues)
6. Society Keen to extend his services to society in general & relates institutes objectives to social needs
7. Industry Conscious of the importance of productivity, quality control of product & quality of life, environmental production. Values professional ethics, honesty, discipline, timeliness & industrial relations.

Thus staff performance appraisal should be linked to appraising whether the staff to be appraised possesses the requisite skills, knowledge & attitudes required to carryout all the five stages of development.

4.0 HOW TO EVALUATE

The traditional methods normally prescribe proformas to evaluate the performance at the end of the year. This evaluation is done in global terms : Does he plan teaching well ?

Does he ask questions to promote interaction ? Is he open minded ? etc.

While one would like to have such as a global view of a teachers performance, it must be data-based collected systematically throughout the year to assess knowledge, skills & attitudes cumulatively. This data should be collected in the context of specific job functions a teacher carried out and analyzed & synthesized & only then the evaluation report given. These are called behaviourally anchored evaluation techniques. The basic tools for gathering information about the performance are : interviewing, administering questionnaires, participant observations, self appraisal reports, inspection reports, annual reports, record of interviews & discussions, self reporting, unobtrusive measures, consultancy, secondary research methods, etc.

One should adopt an organic approach to performance evaluation. It means we must develop reporting system (formal or informal) as an integral part of the systems operation. This reporting system will have upward as well as downward direction and also a lateral one in each of development of the system. This reporting system may be in the form of progress reports that will tell the higher authority where the system is at a particular point in time, statement of problems being encountered & of plans for solving them & if the help is needed, the specification of its nature & a request for it. (9)

This system is said to be organic, because the appraisal system is integrated with the normal functioning of the institute & is an ongoing process; and further it will be an in-

tegral part of managerial function. There is no element of surveillance involved in this process. This organic way of control system assumes that at each level of system operation, the person responsible will 1) prepare a long range project plan for system change 2) prepare workschedule identifying the milestone of achievement. (13)

Many managers will have to be trained for diagnostic, research, analysis & synthesis skills needed for this systematic staff appraisal and they will have to learn how routine duties would be delegated to the administrative staff & devote more time to creative efforts.

5.0 NEED FOR CONSULTANCY (5)

The technical education system is known for its apathy towards behaviour sciences & social sciences, as they are steeply absorbed in physical sciences & technology subjects which are considered hard sciences.

But one cannot avoid getting away from behavioural & social sciences, if performance of the system is to be improved.

The awareness of the importance of the behavioural sciences in the higher educational systems - in engineering colleges & IITS' & higher level of policy-making & administration is miserable.

Any organization embarking on this venture of the staff appraisal will always need consultancy services for designing the system. These consultants must have a good knowledge of the Technical Education System & also have an indepth knowledge of educational technology, curriculum development, state level educational planning &

management, organizational development & change, systems thinking etc.

Such people are rare in the present system. Ministries of education at the Centre & the state should develop such cards of consultants urgently through well planned long range strategy. Ultimately every organization will have to develop internally its own capability to provide such guidance to the staff.

All organization should demand such consultancy services before installing staff performance appraisal system. It is of utmost importance that this system of appraisal should not be integrated organically to help the people develop & contribute to the systems development.

To begin with, IITs can serve as consultants to the engineering colleges, TTTIs to the Directorates of Technical education & their Extension Centres to the polytechnics.

6.0 EVOLUTION OF SYSTEM : (1)

Since the performance appraisal system is proposed to be developed organically, this system will have to evolve along with the systems change cycle. Organic evaluation takes place only when systematic effort is made to cumulatively collect past experiences integrate them with the current practices and plan for future changes. This effort must be done by the system as a whole. The results

of all past, present & future efforts should be available to all through journals, internal circulars & staff development programmes, staff meetings etc. A small group has to devote time to analyse & synthesize all the individual threads into an organized body of knowledge on staff performance appraisal systems which is once again available to all concerned through written & verbal communication system.

7.0 STRATEGIES TO CAUSE CHANGE IN THE EDUCATIONAL SYSTEM :

There are three broad strategies employed to involve people participate actively in the system change cycle. They are 1) Power Coercive strategies 2) Emperical-rational strategies 3) Normative-reeducative strategies (1) Power-coercive strategist use position power to influence participant's attitude towards change as a starting point, but gradually persuade the participant through providing them them rationale for the innovations through experimentation, and making group to which the person belongs accept the need for change. Further all of them are provided opportunities for reeducation whenever needed to understand & practice innovation.

Systems change cycle along with the staff appraisal system should be introduced through careful planning for the use of all those strategies of planned change.

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