

MANAGEMENT INFORMATION SYSTEM FOR TECHNICAL INSTITUTION

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Abstract:

The management information system which is now need of time, is explained with its benefit and the steps involved in implementation are discussed. The reason for introducing MIS in the technical institution is discussed in detail. The structure of proposed MIS with description of Input files and output format along with conclusion is also presented.

1. INTRODUCTION :

Information, the logical output of an information system is of vital importance to the managers of a firm to achieve short, intermediate and long range goals. Many wrong decisions have been the result of insufficient or inadequately processed information.

There is a growing awareness that accurate and timely information is a vital resource of the firm and that an effective information system is a means of providing the needed information. The total system concept provides the right information to the right people at the right time in the right format and at the lowest possible cost. Management Information System is a system for producing and delivering timely information that will support management in accomplishing its specific tasks in an enterprise. Benefits are more timely information, more effective use of manpower and facilities, elimination of peak period volume reports, prompt correction of out of control conditions (i.e. management by exception). The information may be useful for operational, tactical and strategic

decision making. The management by exception principle is an integral part of real time MIS in that only extraordinary events - favorable or unfavorable are brought to the attention of those responsible and accountable.

The information system is sometimes called as control system, since output of information system is report oriented i.e. control report an orderly flow of timely information for meeting specific management needs. Control which is nothing but process where planned performance is brought into line or kept in line with desired objective. An objective is an end result that is to be accomplished by the execution of the plan. The inputs into control process are in the form of plans, which indicate how process should be designed. The output of the process is in general called performance. The performance is the state of the process at any particular time. The characteristic system should be accurate, flexible and easy to use. Also system should produce output that could be trusted and be straight-forward to learn.

Four special reasons for system planning are :-

- i. To offset uncertainty;
- ii. To improve economy of operation;
- iii. To focus on objectives;
- iv. To provide a device for control of operations.

2. STEPS IN IMPLEMENTATION :

The major implementation task consists of -

- i. Organising the personnel for implementation;
- ii. Acquiring and laying out facilities;
- iii. Developing procedures for installation and testing;
- iv. Developing the training program for operating personnel;
- v. Completing the system software;
- vi. Acquiring required hardware;
- vii. Designing form;
- viii. Generating files;
- ix. Completing cutover to a new system;
- x. Obtaining acceptance;
- xi. Testing of entire system;
- xii. Providing system maintenance.

3. WHY MIS NEEDED:

Guidance and counselling services are one of the important strategies in developing efficient technical manpower. Advising and monitoring procedures are adopted to ensure that the student fulfill the academic requirement of a programme. Every programme in the technical institution is designed for a student with the aim of

- i. Development of competence in oral and written communication;
- ii. Development of an attitude of creativity;
- iii. The ability to tackle open ended problems;

iv. The competence to critically examine alternative solutions;

- v. The ability to use computers in analyzing and solving problems related to the discipline;
- vi. The appreciation of constraints imposed by economic factors, safety consideration, reliability, ecology, aesthetic, ethics and social impact.

Self finance technical institutes ,which have been permitted in Maharashtra State in 1983, depend on student fees for all their expenditure. They are not getting any grant-in-aid. So every activity are centered around student as its survival is due to student admission in the institute only. The institution in which proper environment is there for student learning is bound to attract large number of students. Due to sudden starting of a large number of technical institutions, conditions had arisen where some institutions were not getting required number of students who are domicile of Maharashtra State. Then institution has to OPT for non-Maharashtrian student. As felt every where, the outside state students are not so keen in pursuing the academic studies compared to state students and also they are not eager to attend classes regularly. Some of them are in need of getting degree due their family background. With more number of out-of-state student, to maintain discipline in the institution is a difficult task.

The cream of society is firstly opting for Government College due to lower fees and if they could not secure seat in it, then they will be taking admissions in self-financed institutes. Such student will be requiring much more effort from institute side and will require more counselling.

As these institutes are generating funds by student fees only, if the result of any class was low, then next year, the number of students taking admission in higher class will also less and this will be ultimately affecting total institute revenue. Due to this some development activities may also suffer. So the Principal should get information about the syllabus coverage in class and student attendance from time to time. If students attend classes regularly then generally it is observed that result is also satisfactory.

Due to sudden increase in number of technical institutions in the state, there was shortage of dedicated, qualified and experienced staff. Institute has to recruit fresh graduates for teaching. Out of these fresh graduates, some may be interested in building teaching as their career but others may be only for stop-gap arrangement until they get their suitable job they like, so they will be not taking necessary efforts as required of a fresh graduate. Due to this the students will be suffering academically which ultimately affects the academic performance of the institute. If the institute result was excellent consistently for number of years which may be due to proper student counselling and combined efforts of students and staff, the image of institute in the society, in the job market, will enhance. This will result in, meritorious student trying to get admission in the institute.

For any developing institution, close monitoring of different activities is very much desirable. The proposed MIS which is designed for student counselling will help management body, the Principal and the Head department in monitoring and taking strategic, tactical and operational decisions as and when required by the principle of management by exception.

4. PROPOSED SYSTEM FOR TECHNICAL INSTITUTIONS.

The flow chart of the proposed management information system for a technical institution is as given in figure 1.

The details of the various inputs and output files are as follows:

A) **INPUT FILES :-** There will be following five files as given below.

- 1) **Student File :-** For every student, when he takes admission in the institute, a six digit number will be allocated to him. This will remain in force until he leaves the institute. The structure of number is as follows.

YYABXX : where YY – year in which admitted in the institute.

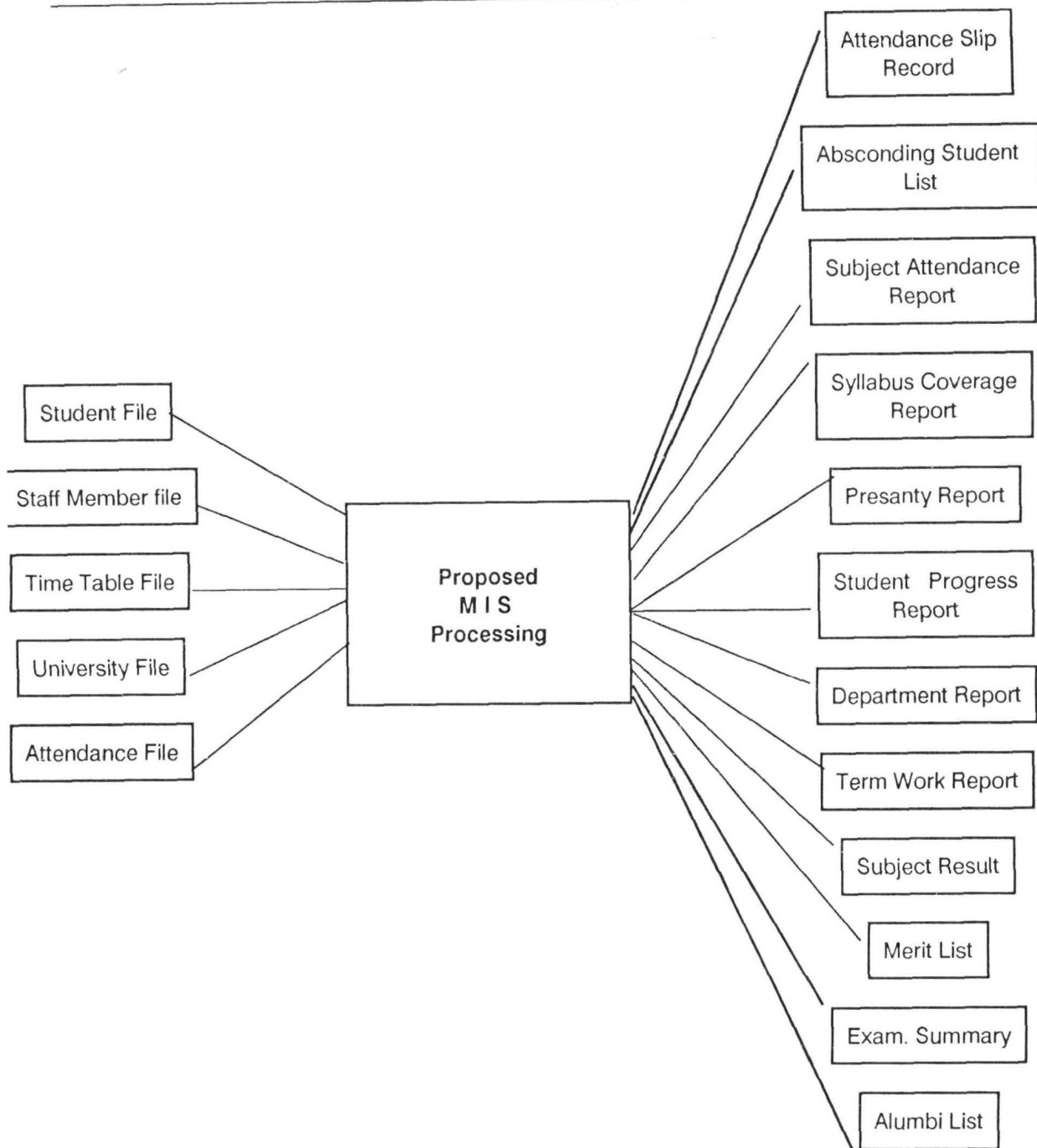
A – Programme opted i.e. degree or diploma

B – Branch code.

XX – Admission No.

In this, student's permanent address and date of birth is also stored.

- 2) **Staff Member File :-** For every staff member, there will be a three digit number out of which first digit will be for the dept.in which he belongs and the last two digits is for him. In this every detail about staff member viz. qualification, date of birth, experience, date of joining institute. List of various subjects taught with their percentage results at the institute will be entered.
- 3) **Time Table File :-** Entire institute time table for all years of various branches and of various programmes will be entered, the code number of staff engaging the subject along with the role number of practical batches will be stored.
- 4) **Attendance File :-** When a student takes admission in any year of any



SYSTEM FLOW CHART OF PROPOSED MIS FOR TECHNICAL INSTITUTIONS
Fig. No. 1

branch for any programme then he will be allocated a five digit number, this will be in force for one year only. The structure of No. is as follows.

ABCMM

A – Programme opted i.e. degree or diploma.

B – Branch code.

C – Year of study i.e. FE, SE, TE, BE, FY, SY, TY.

MM- Class roll number.

for every period engaged, staff member should take presentee on slip and handover it to the HOD office. The proposed format of the slip is as follows.

system flow chart.

ATTENDANCE SLIP.

| | | | | | | | | | |
|---|---|---|---|---|---|--|---|---|---|
| A | B | C | D | D | E | | P | R | R |
| ROLL NO. OF STUDENT PRESENT IN CLASS | | | | | | | | | |
| SYLLABUS COVERED OR PRACTICALS | | | | | | | | | |

where A, B and C have meaning as given above.

DD – subject code No.

E – whether theory or practical project.

P – dept. code No.

RR – staff member code No.

B) The output in the form of various report will be as follows:

1) **Attendance slip record** :- List of staff members along with their department who had not submitted attendance slip for last day.

2) **Absconding student list** :- A list of students who were absent for consecutive four theory lectures or two practicals for any subject of all

branches for all one year will be ready by end of every week.

3) **Subject attendance report**:- A list of subjects alongwith their concerned staff member details in which presentee of students was less than 75% for any period alongwith its preceding and succeeding period attendance. This can help in pinpointing the fault.

4) **Syllabus coverage report** :- This will be giving periodwise syllabus covered in class for all subjects of all branches alongwith No. of period engaged.

5) **Presentee report** :- This will give the presentee of students in the class for all subjects as and when required for granting terms.

6) **Student progress report** :- This will be for every student, it is about subjectwise attendance for theory and practicals, a list of subjects in which he will be appearing in the University examination alongwith all its previous University result records. This can be sent to the guardian for advance information.

7) **Department report** :- This will give departmentwise, the list of subjects engaged alongwith the staff member name, No. of periods engaged for theory and practicals, alongwith aggregate average student attendance. This will be helpful to the Principal and HOD in planning and taking any corrective action i.e. management by exception.

8) **Term work report** :- This will give the list of students for various years of all branches whose term work is not completed alongwith respective subject name.

9) **Subject result** :- This will give University result for the subject alongwith result analysis i.e. student

with 75% attendance in class and its result. This will also give the result for the same subject for past three years.

- 10) **Merit list** :- A merit list of students for all years of various branches will be made. A subject merit list of first five students will be prepared.
- 11) **Exam. summery** :- This will give No. of students who will be appearing for University examination in various subjects of all branches.
- 12) **Alumni record** :- This will give No. of students passed out from institute

for all branches of various programmes alongwith their names and addresses.

5. CONCLUSION :-

The total system concept provides the right information to the right people at the right time in the right format and at the lowest possible cost. For guidance and counselling services in developing efficient technical manpower, MIS is needed. With MIS, strategic, tactical and operational decisions can be taken by the principle of management by exception.

"If you morely become scientifically skilled, do not develop the other dimensions of your soul and do not believe that there is such a thing besides knowledge which you call wisdom, you will become merely a monster instead of becoming a master of life"

Dr. S. Radhakrishnan