



## OTPES: Online Teaching Performance Evaluation System

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**Abstract** — Teaching performance evaluation is an integral part of the teaching experience and plays a significant role in improving the teaching effectiveness. The current system for teaching evaluation being used at most of the institutions relies on an inflexible paper system that uses outdated and labour intensive technology. This places a heavy burden on staff members who must process forms and transcribe written comments before releasing the evaluations for faculty review. After recognizing the inefficiency of the paper based system the online teaching performance evaluation system is implemented as that would result in easier and more accurate ordering of student evaluations. This web-based, on-line teaching performance evaluation will significantly reduce the staff work load and improve the overall efficiency.

**Keywords** — Online Feedback System, Teaching Performance Evaluation, Paperless Evaluation, Web based Student Course Assessment, Student Feedback, Student Perspectives on Teaching, Quality Education

### I. INTRODUCTION

Teaching evaluations provide faculty a framework to prepare and measure the impact of their teaching practices while providing a common understanding of effective teaching and enhance professional practices of educators so as to positively impact student learning. The quality of the teacher in the classroom is the most important factor in a student's academic success [1]. Evaluation questionnaires can be an initiative resource for teachers, allowing them to gauge student understanding of a course or the effectiveness of a particular approach to teaching. Questionnaire feedback can be used for a wide range of purposes including departmental reviews, staff confirmation and promotion processes, and performance appraisal and as such, staff members must be able to tailor questionnaires to satisfy their specific requirements [2].

### II. PAPER BASED SYSTEM

Paper-based teaching performance evaluation required considerable administrative effort for data collection, analysis, archiving and dissemination of results to academic managers and teachers in a timely manner. Many problems were encountered in implementing the paper-based teaching performance evaluation such as printing, sorting, and collating of evaluation instruments, assigning faculty codes to maintain confidentiality of data, preparing the evaluation schedule, determining the evaluation venue, and identifying and orienting the proctors for faculty evaluation. During this stage, data inconsistency and redundancy were a common concern since a faculty record can be encoded several times using different faculty codes. This system is complex, inefficient, and very costly. The cost of printing the instruments, and the results of the evaluation as well as the cost of manpower temporarily assigned to help during the administration of evaluation and processing of data is very high. Data accuracy and integrity is highly questionable because of the possibility of errors while encoding the student paper evaluation to the computer for processing [3].

### III. ONLINE TEACHING PERFORMANCE EVALUATION

The On-line evaluation system is developed to significantly reduce staff workload to almost zero by automatically storing numerical data to an electronic database. Summary reports would be generated electronically and made available to the review panels through the system.

The features of the OTPES include:

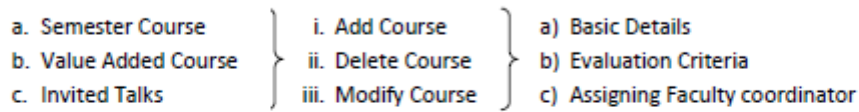
- Common platform for academic courses, value added courses and invited talks.
- Facilities to review and make necessary changes in the criteria used for evaluation.
- Only bonafide students and principal / heads / coordinators can access the system with the use of username.
- Providing Confidentiality by hiding register number of the student in the report.
- Facility to enable log-in for a particular course on specific time period.
- Focus on studying the performance of individual teachers to identify their strengths, potentials, and weaknesses.
- Cluster analysis of the result to help the heads to plan for the faculty development program.
- Results of individual teachers are given in read only Adobe pdf file.
- Information on what courses the teachers are good in teaching and in what courses they are getting low evaluation help in giving the right teaching load to teachers.
- Providing the historical teaching performance evaluation of faculty members for several semesters.

- Providing the college-wide summary of teaching performance evaluation to help the administrators plan for the faculty training programs.

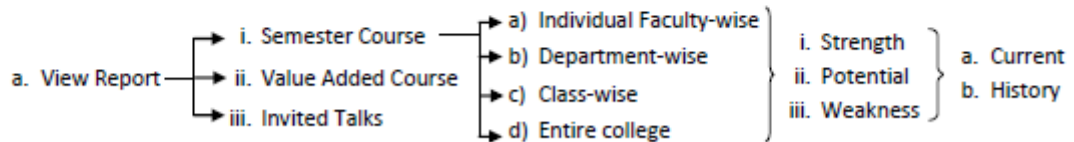
The initial design of the system is shown in the Fig. 1.

1. Log-in

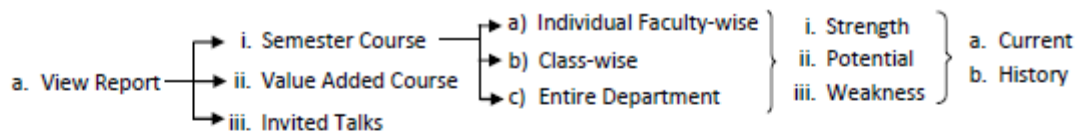
2. Admin



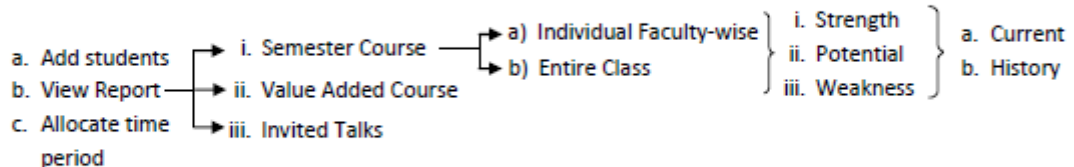
3. Principal



4. Head-of-Department



5. Coordinator



6. Student

- a. View Course
- b. Evaluate
- c. Submit

Fig. 1 Design of the System

IV. USING THE SYSTEM

The system has five users namely admin, principal, department head, class coordinator and student.

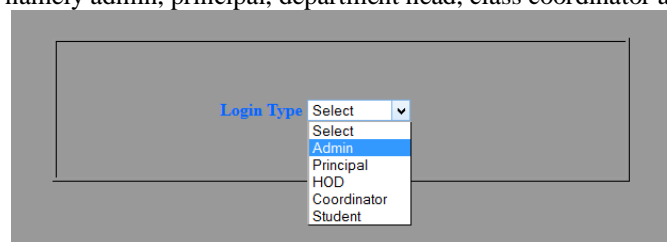


Fig. 2 Login Page of OTPES

The admin is authorised to add the department and create the username and password for the department head.

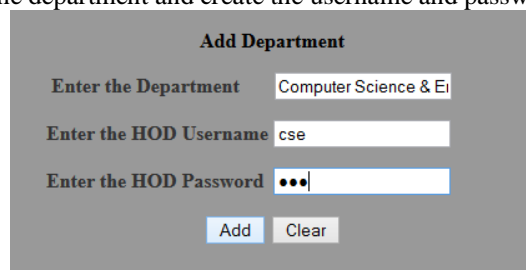


Fig. 3 Adding Department

The admin is also authorized to create an evaluation for courses such as regular academic, value added courses and invited talks. Creation of evaluation includes specifying the parameters and the values for each parameter.

Name	Value
Enter the Criteria 1 Excellent	10
Enter the Criteria 2 Very Good	8
Enter the Criteria 3 Good	6
Enter the Criteria 4 Poor	4
Enter the Criteria 5 Very Poor	2

**Fig. 4 Creating an Evaluation**

The department head is authorized to add the class and create the username and password for the class coordinator.

**Fig. 5 Adding Class**

The class coordinator logs in and enters the student and subject details of the respective class.

Subject Name	Faculty Name
Artificial Intelligence	Mrs. Mekala
Network Security	Mr. Sivakumar
Internet Programming	Mr. Arunkumar
Principles of Compiler I	Mrs. Swarna Sureka
Software Project Manag	Mr. Deeban
Client Server Computin	Mr. Rajiv Sureshkumar

**Fig. 6 Adding the Subject details of the class**

The class coordinator is responsible for enabling and disabling the evaluation.

Fig. 7 Enabling the Evaluation

Fig. 8 Disabling the Evaluation

Student can log in and provide the evaluation after the coordinator enables. The evaluation form is provided in a matrix format with the parameters as rows and the faculty members as columns.

Questions	Artificial Intelligence Mrs. Mekala	Network Security Mr. Sivakumar	Internet Programming Mr. Arunkumar	Principles of Compiler Design Mrs. Swarna Sureka	Software Project Management Mr. Deeban	Client Server Computing Mr. Rajiv Sureshkumar
Communicates high standards and	Very Good	Very Good	Very Good	Excellent	Very Good	Very Good
Is up to date regarding curriculum content	Very Poor	Excellent	Very Poor	Excellent	Very Poor	Excellent
Effectively plans instruction	Very Poor	Excellent	Excellent	Excellent	Excellent	Excellent
Effectively plans assessment of students learning	Excellent	Excellent	Excellent	Excellent	Very Poor	Very Poor
Makes learning goals clear to students	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor
Uses appropriate instructional strategies	Very Poor	Very Poor	Very Poor	Good	Good	Good
Uses appropriate questioning strategies	Good	Good	Good	Excellent	Excellent	Excellent
Creates an environment that is positive for student	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Promotes confidence and perseverance in students	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor
Is constructive and cooperative in interactions with	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor	Very Poor

Fig. 9 Evaluation Form

After the evaluation by the students, the report will be generated on a button click. The coordinator can view the report of the respective class; the Department Head can view for the department and the Principal can view for the whole institution.

Department : Computer Science and Engineering		Class : IV				
Questions	Artificial Intelligence Mrs. Mekala	Network Security Mr. Sivakumar	Internet Programming Mr. Arunkumar	Principles of Compiler Design Mrs. Swarna Sureka	Software Project Management Mr. Deeban	Client Server Computing Mr. Rajiv Sureshkumar
Question 1	9.2	9.3	9.8	9.1	9.2	9.1
Question 2	9.3	9.2	9.3	9.8	9.2	9.2
Question 3	9.3	9.1	9.2	9.1	9.2	9.2
Question 4	9.1	9.3	9.2	9.8	9.3	9.3
Question 5	9.2	9.3	9.3	9.3	9.2	9.2
Question 6	9.2	9.1	9.8	9.3	9.8	9.1
Question 7	9.1	9.2	9.2	9.1	9.3	9.2
Question 8	9.8	9.8	9.2	9.2	9.8	9.2
Question 9	9.3	9.3	9.2	9.3	9.1	9.2
Question 10	9.1	9.1	9.1	9.8	9.8	9.8

Fig. 10 A Sample Report

## V. CONCLUSIONS

For students, the online system could provide them with more time to reflect upon their answers than occurs presently as well as allowing for discursive comments. Additionally, the system enhances anonymity for students in courses where faculty utilize departmental or individual evaluations by eliminating the chance that a student's handwriting is recognizable by the instructor. For faculty, the system facilitates the administration and maintenance of their individual and departmental evaluation instruments and eliminates the need to use class time for course evaluation. For the administration, the system represents a significant labour saving move by eliminating the data entry currently required as well as facilitating retrieval of course evaluation reports used in the review process.

## REFERENCES

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