

# Online Feedback System for Educational Institutions for Better Evaluation of Faculty's Performance Using Semantic Web (SW) Technology

Sivasankari.S<sup>1</sup>, Srimathi.P.S<sup>2</sup>, Ramya.S<sup>3</sup>, Dr.G.Fathima<sup>4</sup>

U.G.Scholars, Department of IT, Adhiyamaan College of Engineering, Hosur, Tamilnadu, India<sup>1,2,3</sup>

Professor and Head, Department of IT, Adhiyamaan College of Engineering, Hosur, Tamilnadu, India<sup>4</sup>

**ABSTRACT:** In recent times, Higher educational Institutions are paying increasing attention to the views of students on the experience of learning and teaching through internal surveys. Online Feedback System is a web based application that provides base for the colleges to conduct students' feedback online. This online system is the good place to find feedback analyzed according to the requirements and it is the efficient one to get feedback analysis. Students give feedback through online using a standard designed form. In the proposed system, security is included, the result of which the feedback is only visible to authenticated users. Online feedback is an integral feature of evaluation of effective & efficient learning & teaching practices. Semantic Web technologies are being applied in recent times with different purposes in Education particularly for which it is used in the proposed system for generating useful feedback reports and the Semantic web tries to rebuild the existing web concepts by adding a layer that will enable us in doing advanced automatic processing of the web content, so that the data can be distributed and processed by both human-beings as well as software.

**KEYWORDS:** Feedback, Report, Online, Forms, Analysis, Semantic web

## I. INTRODUCTION

The 'Student Feedback' Approach is all about institutional practices and processes that are taken into consideration, the students' concerns of the level of the knowledge they receive [6]. This process explains that there is a good relationship between the student's learning environment, and the validation of those total learning environment. In the existing system, students can give feedback about the lecturers manually. After giving feedback, papers are collected by the Staff and the overall grade for each subject and each lecturer is calculated. After that those all grade report is viewed by the HOD which is given by the faculty. But by this process student can give feedback in online system without wasting their time in the manual effort. Hence estimating the performance of lecturers is done in an automated manner. So, the existing system consumes more time to do a piece of work and for this reason the online system feedback is implemented. It is the powerful way to enhance & strengthen student learning. Formulating learning and teaching practices and the views of students are to be considered as the primary factor on which the quality of teaching and learning is evaluated. The idea of feedback is to make corrective actions based on the desired and the actual value that can be implemented in many different ways. Student feedback on subjects in their curriculum is an essential element in quality assurance. Questions in the standard form are very important in relating with students, since they are the best tool for collecting objectives, detailed and reasonably systematic information, which

informs the faculty's about students' perceptions of the course's as well as their strengths and weaknesses that can prompt changes in delivery methods, course content, and guidance for the course.

**Objectives of the system are,**

- To provide the platform to the students in identifying a greater role in the teaching-learning process,
- To develop a sense of responsibility and belonging to the institution among the students,
- To develop the skill of critical evaluation,
- To modify and rearrange the course contents based on students' constructive suggestions
- To help the teachers modify and improve their teaching methodologies,
- To open a transparent communication channel between the students and the teacher, and
- To maintain the functioning of teaching-learning process in the best possible way.

The layered architecture of the semantic web is shown in Fig.1. Semantic web applications are recently being developed in fields and disciplines including education. The Semantic Web is the expansion of the WWW that enables people to distribute content beyond the restrictions of applications and websites[1]. For the development of human mind power, both formal and informal education is important. In whichever format, education is being provided, the ability for the humans to learn effectively is of primary importance[2]

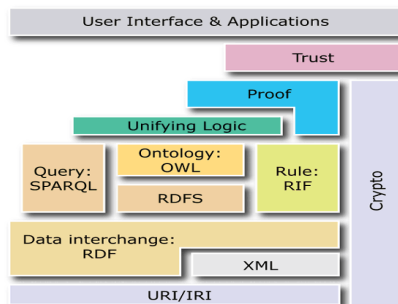


Fig.1: Semantic Web Layered Architecture

**II. SYSTEM ARCHITECTURE**

The architecture design of the proposed system in this paper is shown in Fig.2. After successful login by students, feedback is given on various criteria. Students should fill in this form by clicking radio buttons based on the options. The proposed system has designed with five different forms for user interface like Admin, Principal, HOD, Faculty and Student. Each user has username and password for authentication purpose. The Admin user has more functionality creation of user and assigning inputs for the user, activating the feedback form. After giving the right user name and password, the admin home page appears and in that page the creation of users like faculty, HOD's and Principal is done along with the activation of particular department to give feedback. The Faculty user can see their individual subject feedback report by logging in with their username and password. The HOD's and the Principal of the institution can view the feedbacks in different categories and overall percentage for a faculty is also generated. HOD's login can view the feedback of their department and Principal can view the feedback of the entire institution.

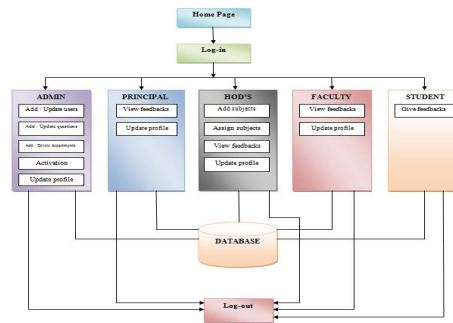


Fig.2: Architecture diagram of proposed system

### III.SYSTEM IMPLEMENTATION

**Home page:**This page consists of student login, admin login, faculty login, HOD login and Principal login form.

**Admin Login:** The page consists of options like adding departments, questions, users and activation of feedback time duration and the Fig.3 and Fig.4 shows the time activation displays for a particular department of an institution to get activated for giving feedback.

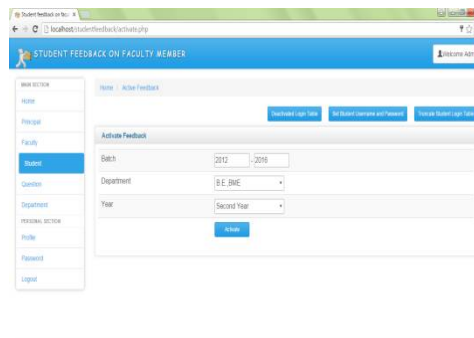


Fig.3: Time Activation for particular Department of the Institution to give Feedback

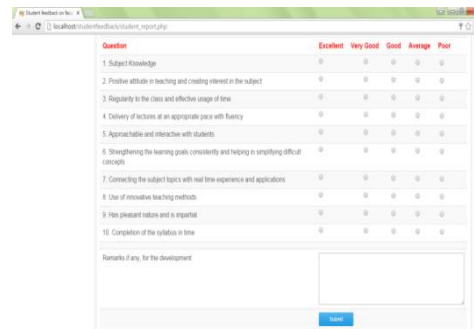


Fig.4: List of feedback questions in the feedback form

#### IV. RESULTS AND DISCUSSIONS

The students provide feedback for each subject in each semester using an online web application as shown in Fig. 4

Standard feedback: The standardized feedback is generated by the classification of the subclasses. It is described by 10 factors as shown in the Fig.4. The questionnaire can be updated by the admin as and when required. Fig.5 and Fig.6 represents the semantic web usage to a database content and how it appears without the usage of semantic web technology. Fig.7 represents the bar chart (intelligible form) generated based on the data (feedbacks) given by the students in an intelligible form of mining data based on semantic web. Semantic web technology is the connection of information that enables data to be linked from a source to any other source and to be understood by computers so that they can perform increasingly sophisticated tasks that can give the output of the data (input) in human intelligible form (charts)



Fig.5 Application developed without semantic web technology Fig.6 Application developed with semantic web technology

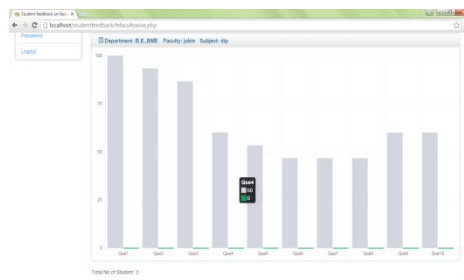


Fig.7: Bar chart generated as a knowledge pattern using semantic web

#### V. ADVANTAGES

This paper in which the concepts of semantic web used is beneficial for institutional use about teaching and curriculum enhancements made in response to student evaluation data. It can also be used in organizations' feedback. This system has advantages like

- Saves time in manual effort – By giving feedback through online system saves time and effort of the manual process.
- Easy Management of the process – The entire process of giving feedback, viewing the report, doing the analysis can be managed easily. The result is generated automatically hence it gives easy and quick feedback.
- Enhances the faculty and students – Through the analysis enhances the students learning and faculty teaching practices.

## **VI. CONCLUSION**

This system is implemented in such a way to reduce the burden of maintaining bulk of records of all the students' feedback in an educational institution. Inserting, deleting, retrieving and updating details of users and receiving the feedbacks online are easy when compared to manual feedback process and storing. Maintaining the details in a database is quite manageable and easy to retrieve. It enhances quality of teaching and it can be increased through evaluation of feedbacks. Further enhancements can be made in designing the screens of the system. Some more forms can also be added so as to enhance better retrieval of feedback details.

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