# Feedback Management System

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**Abstract**: Educational institutions are now paying more attention to what students think about their participation in tutoring and literacy activities through reviews or feedback. The Feedback Management System is a web-based platform that collects student feedback online. The goal of the project was to create a system of evaluation that would benefit both students and educators. The system includes the creation and analysis of feedback runners for teachers, as well as summaries and feedback delivery. All council students and staff members are included in the system's development. Additionally, students can express their opinions regarding their professors. The student's options are as follows: Strongly agree, Agree, Partially agree , Disagree. further, after attempting each question, the user must offer his input to the system. This online feedback system is the best place to find feedback that is estimated according to the conditions, and it is the most useful for getting students and staff feedback analysis.

| Evaluation type | Strongly agree | Agree | Partially agree | Disagree |
|---|---|---|---|---|
| **Rating** | 4 | 3 | 2 | 1 |

**Keywords:** Feedback System, Performance Report, Student Response, Feedback Questions.

## 1. INTRODUCTION

Feedback is nothing but expressing one's opinion on a product, a person's performance on a task etc., which can be used as the base of enhancement. It's useful information given at the right time and through the right means. Education plays a significant part in perfecting the living norms of the people. The largest educational system in the world is thought to be the advanced education system in India Privatization enhanced occasion for the private individualities to establish, Colleges and Private Universities feeding to the adding demand for education.

During the end of the session, the staff provides a Google form, and the overall scores for each area and each lecturer are determined. Following that, the (HOD) of the specific branch and the director sir/ma'am, who is provided by the faculty, view all of the grade summaries. However, this procedure allows students to provide feedback through an online system, saving time, and once the feedback has been given, it cannot be modified.

Education The effect of tutoring methods are defined by the feedback framework. It defines the legitimacy and position of the teaching methods. As more students enrol in institutions, it becomes more challenging to handle feedback manually. A substantial amount of executive effort is required for data collecting in journal article tutoring performance evaluation. Additionally, paper-based tutoring performance assessment is quite time- and money-consuming. On the other hand, information technology is dramatically altering the teaching landscape.

To show the fashion conscious practises and blights present in its system, educational institutions must create and buy or rent Feedback Management System (FMS). The input on preceptors has been mandated by the University Subventions Commission. In order to gauge the effectiveness of educational delivery, it has instructed the National Accreditation and Assessment Council (NAAC) to solicit input from the students. This essay discusses the nonsupervisory ethics, procedures, opportunities, and difficulties of India's Advanced Education System.

## 2. OBJECTIVE

**Effective feedback can offer teachers with information that can be utilized to effectively shape their teaching:** Good feedback practices can offer teachers with vital information for improving their students' learning. The act of assessing

has an impact on both the assessor and the student. Assessors learn about the amount to which teachers have developed expertise and can modify their instruction accordingly.

**We can categorize the teacher's performance based on the feedback score provided by the student:**We are solely doing this to evaluate faculty performance. This is a critical task. Analyzing the teacher's performance will assist us in establishing which faculty's lecture will be easily understood by the greatest number of students.

**Based on Feedback, we Can select The Best Teacher Faculty:**As previously said, choosing the finest teaching faculty will be aided by examining the performance of the faculties. This makes it easier for us to decide which instructor should teach which topic.

**Feedback is useful in establishing where the faculty was underperforming and what the students' suggestions were in these areas:**We can determine which faculties are excellent at teaching a given subject and which are struggling by analyzing their performance, allowing us to alter their teaching subject and assign them the subject in which they excel.

## 3. LITERATURE REVIEW

In order to gather feedback on their experiences with literacy and tutoring through internal audits, higher education institutions have recently given more thought to student viewpoints. This essay covers field research and offers details on the strategies employed by other Australian colleges. The findings show that while student feedback is valued and used by all Australian universities, check procedures differ and, in some cases, questionnaires are validated and trusted. Furthermore, data are mishandled or exploited, and they only provide a tiny amount of implicit data for cross-sector comparability. The study highlights this need entities to create an extensive assessment methodology, from which a valid, reliable, multidimensional, and advantageous formative assessment check is only one element. In order to gather feedback from potential externally and the task environment in new, public, and global contexts, researchers' successes in classroom instruction will also be of interest, as will the operation of ethics [1].

This article describes online student control techniques' design and application in tertiary institutions. It also discusses the student feedback system, which was developed and is presently used in a public institution. The paper also describes how Feedback Management System data is used to assess the efficiency of training both knowledgeable and beginners speakers. The rating is based on the responses that the students gave to the Student's Feedback, which evaluated the speakers' proficiencies in terms of their methods of instruction and professionalism. The results of this preliminary study examined the efficacy of coaching for speakers having various levels of ability. Explained by the fact that both seasoned speakers and newcomers got instructional criticism, the results of the mentorship quality study are conflicting good and negative comments pupils believe that they are unclear [2].

Software on laptops, smartphones, and tablets can be compromised using the "Hypertext transfer" protocol (port 80). The TCP/IP protocol classifies it as an operation subcaste. There are two distinct sorts of scripting web runners: customer-side scripting, or dynamic web runner, which can be made using one of the popular scripting languages like JavaScript, and other; and server-side scripting, or static web runner, which can be made with JAVA and PHP [3].

Due to its ease of use and ability to save time, web-based technology is increasingly being employed in a variety of fields, including the collection of big data from drug users or visitors and the administration of questionnaires. Instead of the conventional approaches described in Introduction to Psychology, a personality questionnaire uses Web-based methods. Another study compares anthropometric questionnaires administered by tone that are based on the internet and paper. Web-based epidemiological studies were used to collect data in order to cut costs and processing times for regular tasks, and the information's quality was on par with or superior to that of paper-based interpretation. A web-based solution has been developed for the medical industry to facilitate medical student access to feedback from medical authorities [4].

Student evaluation surveys were first employed to provide academics immediate feedback on their instruction in the middle of the 1920s in the United States. The results are used for both summative (to influence management choices) and formative (to guide instructional practices) purposes nowadays, where they are widely conducted in institutions across the world (Algozzine et al., 2004; Richardson, 2005). After nearly three decades of fieldwork, Marsh (2007) established five main objectives for the surveys. They must deliver data that students may use to make decisions about the courses they will take and the instructors they will work with, as well as diagnostic feedback on the success of the instruction they deliver to academics, a measure of teaching effectiveness for use in appointment and promotion decisions, and a component for use in quality assurance procedures offering information for academic studies [5].

The innovative work of Marsh (1982, 1987) as well as other professionals like Safe and legal abortion (1985) and Feldman led to the rise of a substantial body of research on student feedback surveys in the 1980s (1978). The characteristics of teaching and learning, the identification of outstanding teachers, and the accuracy, authenticity, and use of evaluation surveys have all been areas of concentration. To determine the state of research on the topic, those writers and other friends have constant value the bibliography. They raise many worrying aspects in its most recent reviews (Abrami et al., 2007; Marsh, 2007; The all & Feldman, 2007). These include the continuing nature of education, the applicability of the measurements used, and the usage of student conversations for achieving academic success and a conclusive evaluation. Institutions must design programs to enhance teaching quality in response to results [6].

Study of the literature Some of the elements of this guideline may be ignored or altered, and a number of elements may be added, to ensure the focus of the literature review about the research objectives, availability of the research materials, and time. The relationship between quality in higher education or quality between institutions will be covered initially during the review. It is crucial to thoroughly discuss the student feedback system in this chapter as well as what feedback is and who is responsible for it. Please explain how this project will use neural networks. Why are PHP and MySQL (the database) being used in this project, what systems are crucial, and how are the projects compared (using SFS)? These questions are answered together with a summary of the chapter as a whole in a table [7].

In order to generate relevant feedback and serve as a source for support, the literature has proposed a number of methods for automatically evaluating participants while they are speaking. To the best of our knowledge, two systems already in existence provide this function. In, the authors used low-level physicochemical characteristics to directly evaluate the speaker's vocal signal. In contrast hand, the study in placed more emphasis on speakers' emotion expressions. In actuality, rather than a speaker support system, this study focuses more on speech emotion detection. Both methods have the disadvantage of simply picking up indications from the voice of the speaker, even as facial expression plays a bigger role in presentations [8].

A moderation queue can provide new perspective, creative thinking, and amazing outlay techniques, according to reference. It will make sure that employee suggestions and comments are valued for the company's future input because they opportunities that may arise points of view. Therefore, a correctly created and implemented suggestion box system can encourage and inspire individuals to provide their opinion that may be advantageous to your particular companies[9].

The majority of the content on the web is unstructured, in accordance with the literature. In order to create a semantic data, or to take data derived from textual material and provide it in a manner than computers use to communicate, more ordered forms are explained in this work. Therefore, only pertinent data are returned when an user searches for information on the web using understanding that has been obtained [10].

## 4. METHODOLOGY

We had used the Waterfall model in this project.This model is best suited for this system because it follows a sequential downward approach and makes it possible to acquire all needs prior to the project's start. A product can move through the stages of the development process model one at a time by setting deadlines for each step and following a timetable
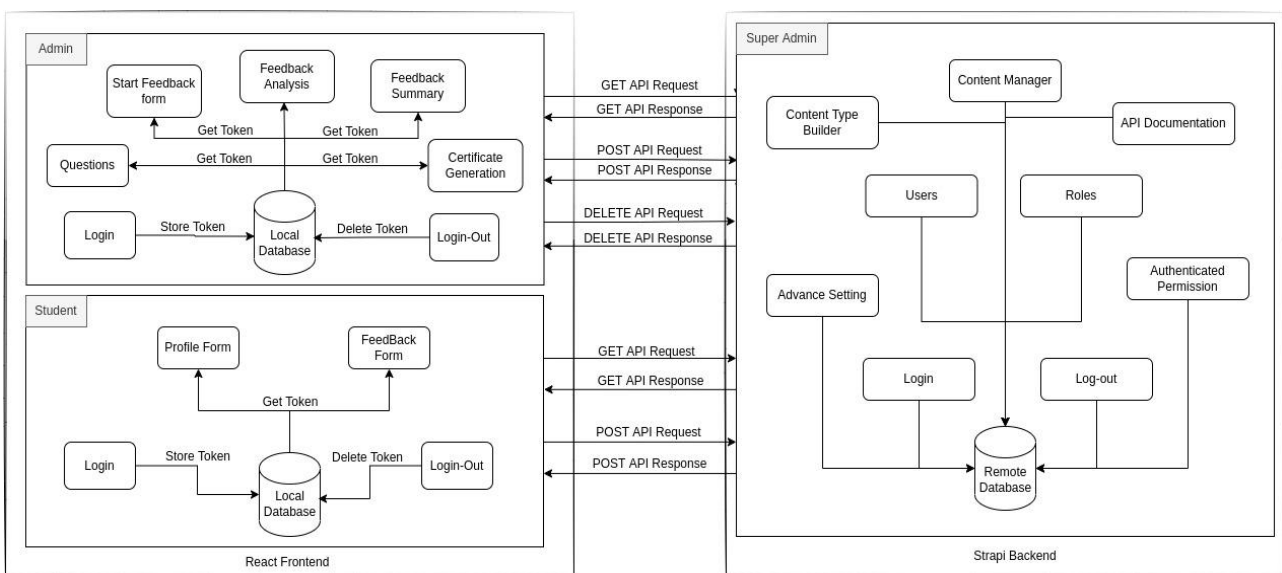


**Fig. 1 Block Diagram**

This technique for managing feedback is web-based. The web-based service is regarded as a computer network at the application layer of the TCP/IP protocol, and this system aspires to be implemented in the near future. This suggested architecture uses a client-server topology for its computer network.

Users or students who are needed to provide feedback are referred to as clients (using a smartphone, tablet, or laptop), and the feedback points are all gathered at the server-side.The client-side, also known as the front end, is built using React JS and other web development tools, and the server-side, also known as the back end, is built using Node JS server and a

reliable Strapi implementation. The connection between the front end (React Js) and back end (Strapi) is done with the RESTful API.

Interestingly, the implementation is carried out utilising a modularization technique to make it easier to create a user-centered design for the system that is free of complexity. Consequently, we have the subsequent modules: Modules for students, administrators, super administrators, and performance reviews.

### Student Module

The student must first log in, at which point a token is generated and stored in the local database. The student can then obtain this token from strapi via GET and POST requests. If a user requests an update to their profile or fills out a feedback form, we will retrieve the token from a local database that will determine whether or not that user is legitimate. Each user will have a distinct token. The user will receive all the data from the post request when the profile form has been constructed with the aid of a token that will pass the get request. For security reasons, the token will also be removed once the user logs out.`

### Admin  Module

The token will be generated after the administrator logs in and will be obtained from strapi after being placed in the local database. Data is fetched using a GET request, updated using a POST request, and deleted using a Delete request. If the administrator wants to make any changes to the questionnaire, activate the feedback form, or create feedback analysis, feedback summaries, or certificates for these purposes, a special token will be generated and kept locally in the database.

### Super-Admin Module:

This model is the main brain of the system. which contains all the information and it is the hub of feedback management which stores all the data regarding feedback management.

It acts as a server for the front end. When every client sends the request to server( Strapi) it will be sent in the form of Application programming interface using GET, POST, DELETE Request. Strapi will respond to that request with a JSON object.

This includes two types of authentication.

1. Authenticated 2. public

A system of permissions governs some aspects of the admin interface as well as the content maintained by Strapi itself. Roles, which are connected to the people who have access to the admin panel, the administrators, might be given these permissions. However, it is also feasible to offer rights more openly, allowing your Strapi application's users access to content.

You should utilise either the Role Based Access Control (RBAC) feature or the Users & Permissions plugin, depending on the users, roles, and permissions you wish to manage.
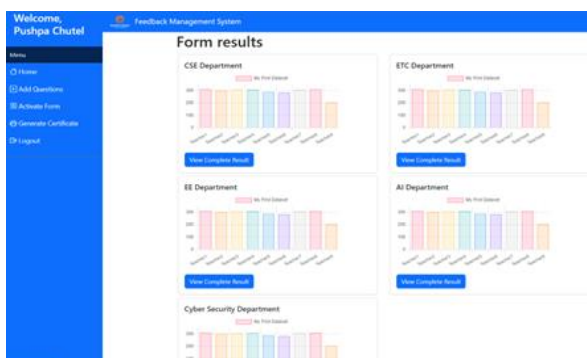
creates statistical information.



**Fig. 2 Admin Side Dashboard**

The admin dashboard shows tabs for various sites and tasks. It displays the results in various charts from several active feedback forms. It was created to show the feedback form's findings in an easy-to-understand format.
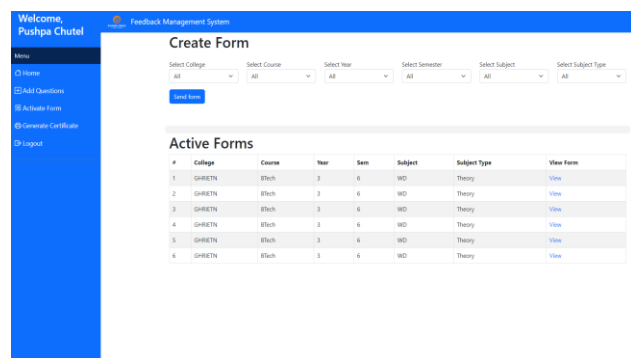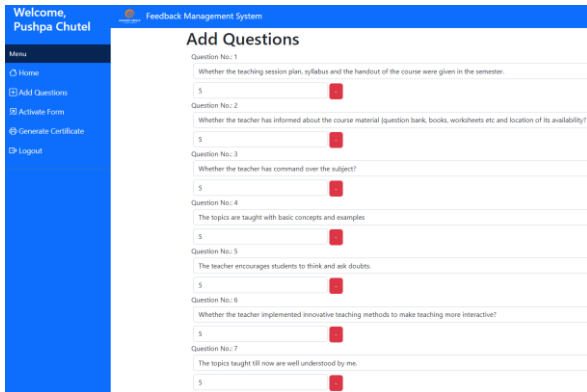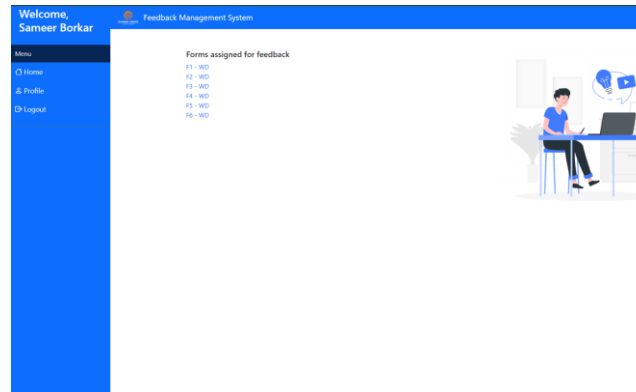


**Fig. 3 Create Form and Active Form**

You may create and manage feedback forms for a range of topics, branches, courses, and topic categories with the help of the form builder tool. The administrative feature is easy to use. The ability to manage the active forms is also available.
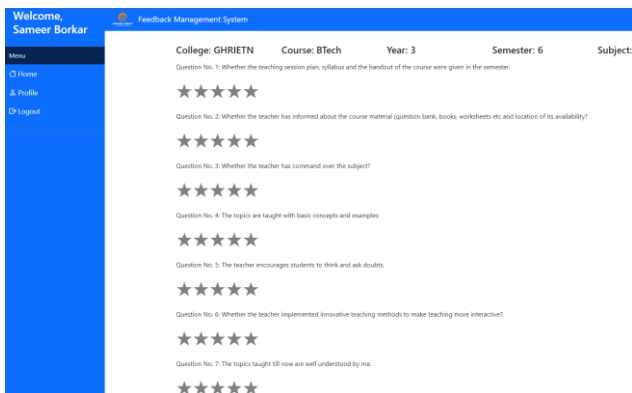
**Fig. 4 Add/Edit Questionary**

The admin can edit and manage the questions on the feedback form. The feedback form administrator is free to add as many questions as they want and set the maximum points for each one.
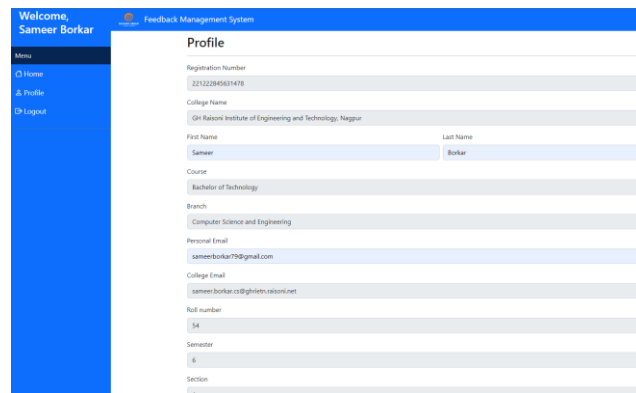


**Fig. 5 Student Side Dashboard**

There are numerous tabs and settings on the student dashboard. A list of the student's allocated feedback forms is also shown.



**Fig. 6 Feedback Form**

It includes questions that the pupils must answer. Users who wish to provide feedback must choose from the options shown beneath each question in order to respond to that particular question.



**Fig. 7 Profile section of student**

On the student profile page, users can maintain and edit their personal information. Without fully completing the feedback form, the user will not be able to submit it.

## 6. CONCLUSION

This study covered the creation and application of a feedback management system for the evaluation of student feedback forms. Universities, Colleges and individuals can all utilise this platform to quickly fill out forms. Our usage of cutting-edge technologies has made the Feedback Management System operate quickly. The web portal has a feedback form that students can fill out. As soon as the students have successfully provided their input, the results and certificates could be generated automatically and right away.

There is no direct correlation between a lecturer and Student. So, this Feedback Management System builds a bridge between actual and desired understanding.

Web development technologies were effectively used to build and implement a proposed framework for online student feedback. Each entry in the implementation represents a student application, totaling 4282 records. The management's development in handling the feedback application is positively impacted by this framework. It can carry out tasks while more efficiently storing and retrieving useful information when compared to conventional paper-based feedback. It is preferable to paper-based because it is error-free and accurate in addition to being free of other flaws.

The Project "Feedback Management System" is designed in order to reduce the burden of maintaining a bulk of records of all the students' feedback details of who study in an Educational Institution. Inserting, retrieving and updating the feedback details of a student are easy when it is compared to the manual feedback and storing. Maintaining the project is also easy which can be easily understandable. Maintaining the details in the database is manageable.

Feedback helps student performance, whether it helps the instructor, and whether it can override and be more efficient than manual feedback.

| Sr. No. | Letter | Criteria for generating letter |
|---------|--------|-------------------------------|
| 1 | Appreciation letter | Teacher Score>80% |
| 2 | Satisfactory letter | 60% < Teacher Score < 80% |
| 3 | Warning letter | Teacher Score < 60% |

## REFERENCES

[1] The Richardson family (2005) : A review of relevant literature on "Instruments for Obtaining Student Feedback" was published in Assessment & Evaluation in Higher Education Vol. 30(4): 387–415.

[2] J. M. Chokwe, "Students and instructors perspectives of feedback on academic essays in an open and distance learning context," Open Praxis, vol. 7, pp. 39–56, 2015.

[3] Robert G. Tian, C. Emery, and Tracy R. Kramer (2003)  Return to Academic Standards: A Review of Student Assessments of the Effectiveness of Instruction 11(No. 1) Quality Control in Education, pp. 37–46.

[4] R. Abu Kassim and N. Buniyamin (2015). Using data from the student online feedback system to assess teaching quality, IEEE 7th International Conference on Engineering Education (ICEED), doi: 10.1109/ICEED.2015.7451494.

[5] Gautama Raithatha, "Knowledge Extraction for Semantic Web", Knowledge Extraction for Semantic Web, ISSN 2321-9939.

[6] AUSSE, 2011, Australian Council for Educational Research (ACER). Web-based at http://ausse.acer.edu.au (accessed 5 April 2011).

[7] Ravindra B.K. and Pradeep M.D. (2017). Teaching, learning, and evaluation pedagogies for higher education 2(2), 21–26, International Journal of Scientific Research and Modern Education.

[8] R. A. Kassim, P. Mohd Arshad, Norlida Buniyamin, Usamah Mat The IEEE 5th International Conference on Engineering Education (2013 ICEED), Selangor, Malaysia, 2013, pp. 233–237, presents "An Overview of Using Educational Analytics to Predict and Improve Students' Accomplishments: A Proposed Proactive Intelligent Intervention."

[9] Trev Barker, "An automatic individualised feedback and marking system: an empirical study," University International Journal on Recent and Innovation Trends in Computing and Communication, volume 3, issue 4, pages 2090–2096.

[10] "Personalization of Immediate Feedback to Learning Styles," in Proc. of 7th IEEE Int. Conf. on Advanced Learning Technologies, pp. 622-624, 2007.