Institute Feedback System

### Pramila Shinde1, Shwetambari Borade1, Aniket Singh2, Prateek Manta2 and Pooja Tripathi2 (Corresponding author).

1Assistant Professor, 2Student,

1,2Information Technology Department, Shah and Anchor Kutchhi Engineering College, Mumbai, India.

[poojatripathi002@gmail.com](mailto:poojatripathi002@gmail.com)

**Abstract.** In this research, our agenda is to underline the significance of feedback system in teaching process, we design and develop an effective feedback system for teaching practice to gain satisfaction with various elements and later for many more purposes like to encourage student education of conceptual knowledge in the course of writing assignments, etc. [6]. We explored the design, forming, and execution of a dynamic, handy feedback system [2]. By analyzing the latest research progress, we determined the existing problems of learning platforms and so an online Feedback system is proposed [1][11]. The proposed system will be capable of handling the real-time problems and future scopes.

**Keywords:** Feedback system, satisfaction, dynamic, conceptual knowledge, learning platforms.

# Introduction

The word ‘feedback’ is used to describe a valuable detail or criticism about prior action from a person, discussed with another person (or a group) who can utilize this information to improve present and upcoming actions and behaviors. Effective feedback, both beneficial and unbeneficial, are very helpful and feedback from students, parents, alumina’s and stakeholders can be used to motivate and to build better working relations.

We are making a generalized feedback system, so that it can be used to create feedback form for events, workshops, seminars etc. The comparison of online available feedback forms like Typeform, Survey Monkey and Google forms is given. Our system will have all the features compared below.

Table 1: Comparison of various online available feedback systems.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr no. | Parameters | Typeform | Survey Monkey | Google forms |
| 1 | Suggestions for MCQ options |  | **✓** |  |
| 2 | Edit and preview facility | **✓** | **✓** | **✓** |
| 3 | Facility to import questions. |  | **✓** | **✓** |
| 4 | Data secrecy | **✓** | **✓** | **✓** |
| 5 | Easy usage and Customizable | **✓** |  | **✓** |
| 6 | Check responses |  |  | **✓** |
| 7 | Option to accept files other than MCQ and long answers. |  |  | **✓** |
| 8 | Facility to change color theme |  |  | **✓** |
| 9 | Templates available | **✓** |  | **✓** |
| 10 | Facility to add title |  | **✓** | **✓** |

# Review of Literature

In our first reference paper, “Engineers’ Written Feedback on Design” they have analyzed experienced engineers’ feedback on design which enabled to characterize and compare experienced engineer’s feedback on design to students and educator’s feedback. A coding scheme consisting of three domains was used to inspect the feedback. This engineer’s feedback also focused on pointing out what is wrong with the design, making direct recommendation on how to fix it, and giving some brainstorming ideas on how the designers might improve their design [1].

In our second reference paper, “Design and Implementation of an Online Learning System”, an online learning system with learning feedback is proposed. It comprises of a learning subsystem and a feedback subsystem. The learning subsystem is designed based on the basic needs of students [11].

Next paper, “Research on Teaching Process Management and Quality Monitoring System for Higher Education” here, they aim to analyze the importance of teaching process management and teaching quality monitoring in advance, and then they design and develop an effective teaching management system for teaching practice. In this paper, the system can not only cover the whole process of teaching, but also reflect the differentiation and hierarchy [2].

The paper, “A Novel Feedback Knowledge Management System (FKMS) in Educational Perspective” determines the procedure of implementing a feedback system for educational institute where we can connect students, administrations, and the ministry of education all together in order to ease the educational process and to make sure that students get proper teaching, it is also an opportunity for all to have right to ask about their requests to be responded. This paper provides a complete linkage between students, school and the education department [3].

The paper, “Lecturers’ Perspective of Student Online Feedback System: A Case Study” displays the outcome of a questionnaire-based observation that had the aim to obtain the perception of professors on the benefits or otherwise of student’s online feedback systems. In conclusion, the case study showed that a university can use information from online Student Feedback System in improving quality of education [4].

# This paper, “Design of Higher Education Quality Monitoring and Evaluation Platform Based on Big Data” combines the efficient processing of big data and data evaluation, monitor the status of higher education normally, and construct a higher education quality detector and estimate the platform based on Spark. It can provide direct, reliable and visual data support. At the same time, it can also provide the participants in the education (educational management, educational policy makers, administrators, teachers and parents) with a more comprehensive and objective understanding of the present scenario of education development and the improvement direction from feedbacks [5].

# System Implementation

# System Requirement Analysis

# Use Case Model

# The use-case model shows the system's functionality from the user's point of view through use case diagrams. There are three participants in the use case diagram, namely admin, users (which include students, teachers, alumina’s, parents etc.) and form creator. The figure below demonstrates the use case of the system.

# 

Fig. 1. Use-case diagram of feedback system

The role of users is to login and fill forms which are available and check answers of the same. The form creator’s role is assigned by the admin to other users by sharing forms with edit or delete functionality, and also view answers just like admin’s dashboard. The role of admin is similar to Form creator role with some additional functionalities.

# The role of admin is to create a form, edit or delete its entries and maintain new versions of the same. Admins can manage users, also generate end reports of the form filled and view answers or responses of the users. A reminder features is also available to remind users via email about the availability of the forms.

# Object Model

# In the object model, Activity Diagrams helps to describe how activities are coordinated so as to provide a service which can be at different levels. It also identifies before- and after-conditions for use cases and model function between/within use cases. The activity diagram for the system is given below.

# 

Fig. 2. Activity Diagram of feedback system

# Subsystem’s Design of the System

The system is wholly divided into 3 subsystems, with each functioning differently from the other. Initially the Admin System includes:

# Admin Login: Here the admin needs to enter email id and password to login into the system. The email id is taken as primary key.

# Form Dashboard: Here, the admin can see all the forms which are created by self and also forms which are shared to him. A search bar helps to find the required form. The admin form dashboard includes two main features view and response.

# The view feature is further categorized into the following

# Edit/Delete: All forms can be edited by the admin by selecting the option.

# Publish: The form made can be published i.e., made available to be filled by the targeted users by selecting further options. A time stamp is maintained to refrain from editing the form after publishing

# Share: The form can be further shared to other creators for changes

# Form Statistic: Here, the admin can check for responses of the form filled by user, with appropriate graph display for convenience.

The response feature gives detail response of individual users, which can be viewed with its selected answers. Also, a list of users which are left to fill form can be viewed.

* Reminder: A reminder function is available to send reminders to the users via email, whose response is not recorded.

# Form design/creation page: For creating a new form, we need to first add form name and a short description, which will then redirect us to the form creation page. The form can have maximum twenty questions with five choices at max. The choices can be of the type:

* Radio: To choose any one option
* Multiple choice: to choose many options.
* Text: To add text input if required.
* Rating: To select rating ranging from 1 to 5
* Linear scale: Used to give generalized options. For e.g., bad, average, good, very good, excellent etc.

# Preview page: After saving the form we can preview the form, save the form and also print the form.

# The User Module includes the following features

# User Login: The user needs to enter email id and password to login into the system.

# User Form Dashboard: Here, the user can see all forms which are shared to him and which needs to be filled. The user form dashboard includes the following features.

# View/check: User can view or check all the forms which are required to be filled.

# Form Disappears: Once the form is filled, the form will disappear form the dashboard to avoid confusions.

# Fill form: Users have to select appropriate choices for the given question and proceed for submission.

# Preview: Users can preview the form before submission.

# History: Users can view their filled form history.

# The Form-creator Module includes the following features

# Login: The creator needs to enter email id and password to login into the system.

# Form dashboard: Here the creator can see all the forms.

# Shared: The form creator can see all the forms which are shared by the form admin, A small tag helps to recognized the shared forms.

# Edit: For the shared forms only the edit feature is available, the creator needs to make changes as per required in the form in the admin’s given time. As the forms are edited, all the changes are synchronized in the admin form dashboard as well.

# Self-created (ADMIN FEATURES): For these forms, the form creator himself is the admin, so all the features are same for this type of form.

# Conclusion & Future scope

Feedback provides people with an opportunity to learn from others. Sharing knowledge and skills will help our institute to grow and develop faster. When feedback is positive, it provides merit where deserved. This, uplifts and encourages an individual for further achievement. If left out on these chances, gives the message that they went unconsidered. This is an indication for encouraging an environment of constant improvement. Motivating individuals to guide others, gives a sense of responsibility and engagement. We will feel implicated in the progress of our college and will be more inspired as a result.[1]. Feedbacks taken via the proposed system will be effectively used and hence many queries will be solved.

The forthcoming plans of the system includes the following scenarios: 1) If the user does not have an email address for e.g., parents, then they will use another key to fill the form i.e., Student Registration Number + Smart Card Number + Mobile Number of Parents combined will be Primary key. 2) Provisions of getting default answers for every question by form designer so that if the user do not have the will to fill the feedback form then the user can just select the Submit button directly and in Feedback Analysis, it should check how many users have directly checked the submission button without modifying the default choice of all feedback questions. (This will tell us how many users were disinterested in filling the feedback form). 3) Auto Publishing Feature, just set date and time. 4) background color themes and readymade templates. 5) Implementation of Audio and Image feedback. 6) Implementation of breakpoints in the question which helps in segregation of user’s choices at last. 7) the form system can be further used for subject quizzes and online test etc. and 8) to take question’s input from other format files like pdf, word, excel etc.

**References**

1. F. Marbouti, H. A. Diefes-Dux, M. E. Cardella, and A. Shafaat, “Engineers' written feedback on design,” 2016 IEEE Frontiers in Education Conference (FIE), 2016.
2. Z. Liu, G. Shanshan, and S. Yuan, “Research on Teaching Process Management and Quality Monitoring System for Higher Education,” 2019 10th International Conference on Information Technology in Medicine and Education (ITME), 2019.
3. A. A. Qahtani, S. A. Utaibi, R. A. Ghamdi, S. A. Ghamdi, and M. Mahmud, “A Novel Feedback Knowledge Management System (FKMS) in Educational Perspective,” 2017 Second International Conference on Information Systems Engineering (ICISE), 2017.
4. R. A. Kassim, J. Johari, M. I. Rahim, and N. Buniyamin, “Lecturers' perspective of student online feedback system: A case study,” 2017 IEEE 9th International Conference on Engineering Education (ICEED), 2017.
5. Y. Li, P. Li, F. Zhu, and R. Wang, “Design of higher education quality monitoring and evaluation platform based on big data,” 2017 12th International Conference on Computer Science and Education (ICCSE), 2017.
6. T. Mejtoft, L. Lindberg, U. Söderström, and E. Mårell-Olsson, “Feedback in commercial educational applications,” *Proceedings of the European Conference on Cognitive Ergonomics 2017 - ECCE 2017*, 2017.
7. E. L. Vargas, J. Hejderup, M. Kechagia, M. Bruntink, and G. Gousios, “Enabling real-time feedback in software engineering,” *Proceedings of the 40th International Conference on Software Engineering New Ideas and Emerging Results - ICSE-NIER '18*, 2018.
8. H. Keuning, J. Jeuring, and B. Heeren, “A Systematic Literature Review of Automated Feedback Generation for Programming Exercises,” *ACM Transactions on Computing Education*, vol. 19, no. 1, pp. 1–43, 2019.
9. E. Dubois and F. Pittarello, “Designing Eco-Feedback Systems for a University Campus,” *Proceedings of the 4th EAI International Conference on Smart Objects and Technologies for Social Good  - Goodtechs '18*, 2018.
10. Y. Xiong and Y.-F. B. Wu, “An Automated Feedback System to Support Student Learning in Writing-to-Learn Activities,” *Proceedings of the Sixth (2019) ACM Conference on Learning @ Scale*, 2019.
11. J.Ye, B.Xun, D.Lau, Z.Wang and S.Chen, “Design and Implementation of an Online Learning System,” 2018 2nd International conference on Data Science and Business Analytics(ICDSBA), 2018.