

Google forms that made teacher's life easier: An experience and experimentation

Rohith Hallur¹

¹Centre for Engineering Education Research, K L E Technological University, Hubballi-590031

¹rohith.hallur@bvb.edu

Abstract: "Present generation is born after internet was Born" which speaks about Technology, Smartphones, and Social Networks. These tech-giants show its impact on students, who are getting into engineering profession. The process of learning engineering requires lot of efforts from both learners and teachers. Several researches are under process in order to optimise the teaching process to address the current generation. It has also become very difficult for the present generation learners to adapt to the old pedagogy techniques and tools to get interactive with teachers. The techniques of teaching have generated huge data which is a big challenge for the teachers to manage. To handle such huge data several tools are available which also facilitate its analysis. One such user-friendly tool is Google form. Usage of Google form reduces workload, increases efficiency and accuracy of a teacher's work. This paper speaks about an experience of usage of google forms in engineering education which changed means of approach towards students, thinking, collection of information and working style of a teacher in this era.

Keywords: Pedagogy, Google form, Engineering education, tech-giants, huge data.

1. Introduction

Twenty first century is called as the Knowledge Age, wherein a new advanced form of capitalism is established in which knowledge and ideas are the main source of economic growth. Knowledge plays a very important role in Education System and its meaning is constantly changing. Knowledge is not at all static storage anymore, where we develop and store in the minds of the experts, represented in books and classified into disciplines. Instead, it has become like a form of Energy, as a system of large networks and flows, something that does things or makes things happen [1]. Thus imparting and seeking this knowledge is a great challenge. Educational institutions are facing this challenge and trying several new strategies to keep students active and bring them to class room. One of the core measures to assess the student's learning is through Assessment activities. Due to drastic increase in the number of knowledge seekers in the institutions, maintaining the

data related to all the activities conducted in the classroom becomes a major obstacle for effective teaching. The aids that a teacher can be equipped with to collect and maintain data on the activities conducted in the classroom have gained popularity recently. One such tool is Google form. The author of this paper have explored and used this technology in his classroom to check its effectiveness.

Class room without Google Form:

The difficulties faced by the author in his course before using the technology are:

- 1) Storage and handling of feedback through paper based technique.
- 2) Analysing the collected feedback.
- 3) Conduction of quizzes through paper based techniques and generation of marks.
- 4) Management of time during class hours.

The author tried to overcome his difficulties mentioned above by using Google Forms. To evaluate its effectiveness, some of the parameters considered are:

- 1) Time to time feedback collection to improvise teaching-learning process.
- 2) Conduction of quiz to assess students, to check effectiveness of teaching.
- 3) Analyse the data collected through feedbacks to improve teaching-learning experience.

Through analysis it could be deferred that Google form indeed helped the author to interact, assess and collaborate with students.

2. Google Form

A. What is Google Form

Google form is a free Service, provided by Google Inc to make survey or poll, plan an event, conduct a quiz and collect any other information, whether it is big or small[2].

B. Why Google Form?

Basically google form service is free of cost, which can be accessed anywhere in the world. Easy to learn the process. One Gmail ID provides 15GB of cloud storage free of cost with google form service, which helps us to create 100's of forms to collect any kind of information and store. It is user friendly, easy to access, involves flexibility of data validation technique, data can be stored in spreadsheets and can be downloaded free of cost.

C. Evolution Google Form

In Early 2011 the user interface that was provided by forms was up to the mark and had very less number of templates. Fig.1 shows the view of google form in early 2011, sample collected as a feedback for an event hosted by the author. In 2016 Google forms evolved to provide a large number of built-in templates and also customisable templates where user can customise by inserting images based on his/her requirements. Fig.2 shows latest view of a google form with good quality UI which has increased the efficiency of data collection.

Fig. 1 view of google form in early 2011

Fig. 2 Latest view of google form

3. Implementation

In Engineering Education we find large number of tools to measure different parameters to assess, interact, evaluate student learning and share required necessities to students. They are called Learning Management System (LMS) [3]. Google form is one type of LMS which helped author to achieve above cited problems.

Following are the key points which give clear picture on how best google forms were used effectively.

- 1) This experiment of google form was implemented on approximately 1100 freshmen engineering students, who study in K L E Technological University, Hubballi.
- 2) Approximately 95% of the students of the class strength were able to participate due to flexibility of google form.
- 3) Flexibility is nothing but google form can be reached through any of digital devices like smart phone, tablets, laptops and desktops. In this generation approximately 99 among 100 students will have smart phone which made conduction work easy. Institute also provides tablet and Wi-Fi in lab for E-learning, this was an added advantage to the author.
- 4) To access google form students need one web link which was shared through class group created in WhatsApp.

4. Results

The outcomes of the experimentation were analysed with respect to three aspects namely quiz, feedback and analysis of the quiz and feedback. All these aspects were considered with the usage of the Google forms which are discussed in this section to evaluate the effectiveness of the Google forms in classroom.

Class rooms with Google form:

A. Quiz

Conduction of quizzes after completion of certain module was important to check the effectiveness of teaching and learning. Google form is one platform which helped author to conduct quizzes effectively. Few key features that helped author to create quizzes are as follows:

- 1) To conduct quiz only link is required which was shared through class group created in WhatsApp.
- 2) Quizzes were broken into pages, first page had option to enter his Roll Number as shown in Fig.3 Once student enters his/her roll number he/she will be redirected to quiz page as shown in Fig.4.
- 3) In quiz, questions can be randomized which helps to reduce the monitoring work during test.

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- 4) Students were allowed to use smartphone, tablet and computers to attend quiz in classroom.
- 5) Time was monitored manually, forms doesn't provide that feature where it closes by itself after given time.

Fig. 1 First page view of google form created to conduct quiz

Fig. 2 Second page view of google form created to conduct quiz

B. Feedback

Collection of feedback is very important aspect of teaching-learning process, which helps to know the involvement of teacher with students measuring the teacher's teaching effectiveness, behaviour and attitude towards students in order to improve their interpersonal skills. Role of google form to collect feedback are as follows:

- 1) Feedbacks were collected to check the pre knowledge of students to modify teaching process accordingly.
- 2) Feedback was collected to check whether the teaching methodology is going on right path or no.
- 3) Feedback was collected to check effectiveness of teaching through post tests for the students after completing the module in the course.
- 4) Feedback was collected to improvise teacher's attitude, behaviour and sincerity towards work through properly set questionnaire as shown in Fig.5.
- 5) Fig.6 shows the feedback submission of students through graphs, which is easy for analysis.

Fig. 3 View of feedback form questionnaires

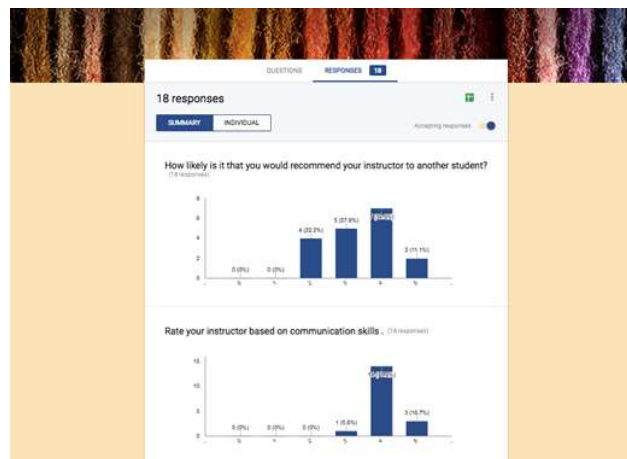


Fig. 4 View of feedback received in the form of graphs

C. Analysis

These days collection of data has become easy task but analysing data is the biggest challenge in education. Google form is one such tool which makes teacher's work easier, which helps to analyse data with following key features, that author used.

- 1) Once students submit google form, for every question graph is generated with the data of all participants as shown in Fig. 7, where the author analysed status of each class.
- 2) Individual responses were also analysed for every question.
- 3) Fig. 7 and Fig. 8 shows pre and post-test of students of one division and with first question we can easily identify through column graph that there is shift in learning from low to high.

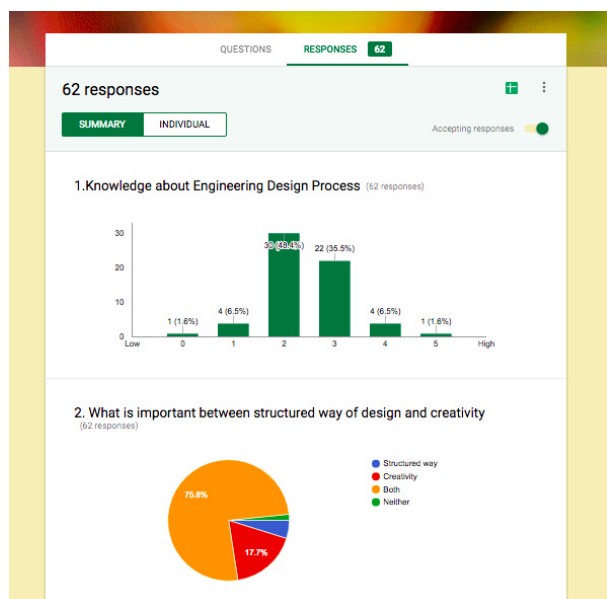


Fig. 5 Graph generated for pre-test questionnaires

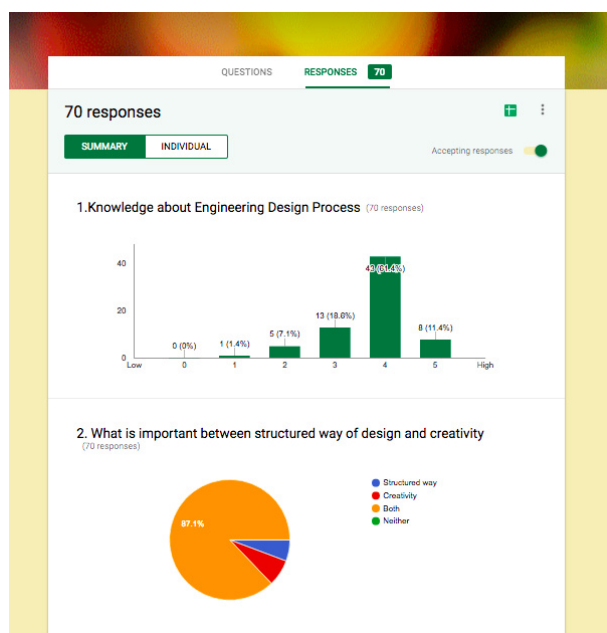


Fig. 6 Graph generated for post-test questionnaires

5. Observation and Discussions

During the process of usage and implementation of google forms certain things were observed. Conduction of quiz, collections of feedback and analysing them were completely digitalised and made user friendly, which led to ease of collection of information. Through Google forms it reduced our time of collection of feedback and it was more effective for a teacher to understand through graphs that was auto generated after collection of feedback. As author was interested in genuine feedback, students identity was hidden, a feature provided by forms. This information was given for students and it led to a genuine feedback, which

really helped the teacher to overcome issue of biased feedback.

6. Conclusion

Author tried to showcase the importance of digitalised life through the adaption of google forms to transform the thinking of a teacher, so that a teacher can get connected through the present generation for their drastic change of learning style. This experimentation bridges the gap between students and teacher. Quiz, feedback and analysis of data received through the forms is shown through this paper. The scope of the paper will be extended to use more number of Learning Management Systems that helps a teacher to find more effectiveness in quizzes, feedback collection and analysis of both through different features that are expected to be added.

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