

Google Docs: An Effective Collaborative Tool for Students to Perform Academic Activities in Cloud

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ABSTRACT

Higher education has a definite and challenging role in shaping the students to adapt the online technologies in their learning process. Internet has become the backbone of the modern education system. Internet provides opportunities for students to develop proactive approach towards their learning. Cloud Computing relies on sharing computing resource. Google Docs is one of many cloud computing document-sharing services. It is important for students to see the power of collaboration through cloud and to learn the rules about collaborative with each other in doing their team activities. Collaborative tool helps the students to do group work with their team members from anywhere, anytime and on any device with the help of internet to complete the tasks. It also enhances the educational experience of the students. Google Docs allows student to create, format text documents, slides, sheets and forms collaboratively with their team. The objective of this paper is to implement the Google Docs, an online collaborative tool for doing academic activities such as group assignment, seminar, review presentation, documentation and dataset preparation.

Keywords:- Internet, Collaborative Tool, Cloud Computing, Academic Activities, Google Learning Tool

I. INTRODUCTION

Cloud computing is latest trend in IT world. It is an Internet-based computing, whereby shared resources, software and information, are provided to computers and other devices on-demand. This technology has the capacity to admittance a common collection of resources on request. The development of the Amazon played vital role by making modern data centres. In 2007 Google, IBM and many remarkable universities and companies adopted it. And in 2008 Gartner highlighted its characteristics for customer as well service providers specified in [1].

Cloud computing enables companies to consume compute resources as a utility as discussed in [2]. Three of the main benefits of cloud computing includes:

- Self-service provisioning: End users can spin up computing resources for almost any type of workload on-demand.
- Elasticity: Companies can scale up as computing needs increase and then scale down again as demands decrease.
- Pay per use: Computing resources are measured at a granular level, allowing users to

pay only for the resources and workloads they use.

Cloud computing provides Software as a Service, Platform as a Service, Infrastructure as a Service on-demand specified in [3].

Software as a service (SaaS) is a cloud-based applications that run on distant computers “in the cloud”. It can be owned and operated by users’ computers via the Internet.

Google Docs is software as a service provided by Google specified in [4]. Google Docs is a free web based word processor, spreadsheet, presentation, forms and data storage service offered by Google given in [17].

Collaborative learning is essentially people working together to solve a problem. Collaboration tools can route works through a process, distribute tasks to involved team member, and help to coordinate activities [5].

Document sharing and comments provide students with opportunities to work on the document online. Since Docs are stored online, students can

work at college and at home from any computer with an internet connection specified in [5].

The online collaborative tool assists in basic project management activities, assignments, creative drawings for presentation, remote presentation, enabling groups to modify output in real time specified in [6].

Google Drive is a file storage and synchronization service created by Google. It allows students to store files in the cloud, share files, and edit documents, spreadsheets, and presentations with collaborators.

II. REVIEW OF LITERATURE

Haring-Smith (1994, p. 360) defines collaborative writing as involving more than one person who contributes to the creation of a text so that “sharing responsibility” becomes essential. Collaborative learning takes on a variety of forms in an active process including the use of technology as a medium and tool specified in [10].

Macdonald (2006) with the development and advancement of computer networks, online collaborative learning becomes possible even if students cannot meet in a classroom. In a writing classroom, collaborative writing can also be encouraged with the use of the World Wide Web. Many institutions have attempted to make use of technology in collaborative activities. Apart from blogs, wikis, chat rooms, forum, learning logs, Google Docs is an online suite of digital tools that provides teachers with some powerful features to help 21st century students develop writing skills specified in [11].

Oxnevad (2013), the concept of teaching writing skills is shifting, and teachers are faced with adapting their teaching practices to integrate new technologies while redefining writing and learning for the 21st century specified in [12].

Lamy & Hamper (2007) the era of Web 2.0 application brings about many useful Internet services and programs such as blogs, wikis, and Google. For a decade, blogs are usually used to share information while wikis allows anyone to edit, modify, or delete content specified in [13].

Thompson (2008) it allows users to create, edit and store their documents online. An extensive revision history is maintained. It is possible to view the entire document as it appeared at any time past. An author can choose to revert to an earlier version.

Google Docs includes four major options: Google Documents, Google Spreadsheets, Google Presentations, and Google Drawing, which all share similar functions. There are also tools to compare any two versions of a document specified in [14].

Chinnery (2008) states that Google Docs is a productive tool where learning activities can be designed differently and creatively. For instance, an instructor might post a text, intentionally replete with errors, for learners to correct. Likewise, learners can easily peer-edit, as this program leaves an editing trail specified in [16].

Conner (2008); Perron & Sellers (2011) another option is chain storytelling, where an instructor begins a story which each learner contributes to in turn. Moreover, this tool is useful in group projects in general. Google Docs allows individuals to work on a common task without restrictions often imposed by traditional face-to-face contacts specified in [18].

III. RESULTS AND DISCUSSION

The activities such as document creation, project review report, seminar presentation and other tasks were implemented in Google Docs. The files that are created in Google Docs are saved in Google Drive.

A. Implementation of Google Docs

Sharp (2009) suggests that this collaborative editing tools allow a group of individuals to edit a document simultaneously while they can view the changes made by others in real time specified in [17].

Choose the documents, slides, forms and sheets to be collaborated in Google Docs using Gmail account.

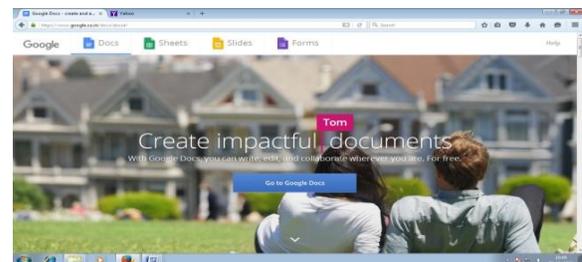


Fig.1 Home Page of Google Docs.

The students can also choose the template to Google Docs lends itself to collaborative academic activities with multiple team members work together in real time located at diverse location.

All Team members can see who made specific document changes and when those alteration were done as the documents are stored online [9].

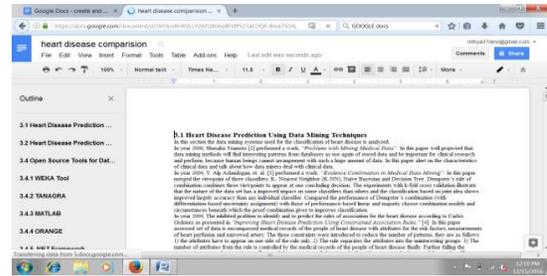


Fig. 2 Assignments created online.

For sharing dynamic data by different members in cloud, it is necessary to register before they want to view the shares data.

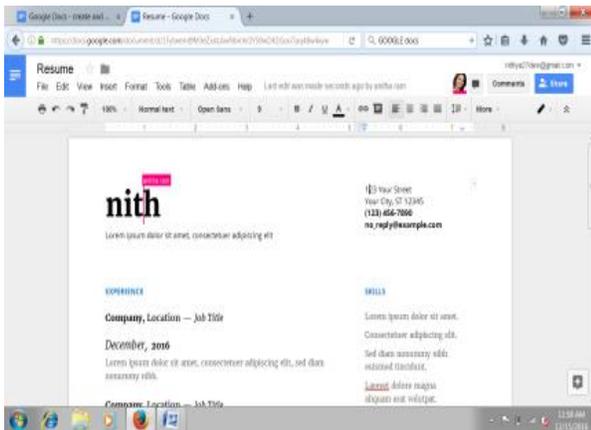


Fig. 4 Collaboratively designing the Resume

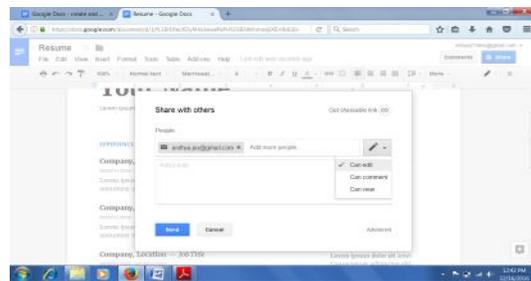


Fig. 3 Sharing the Document.

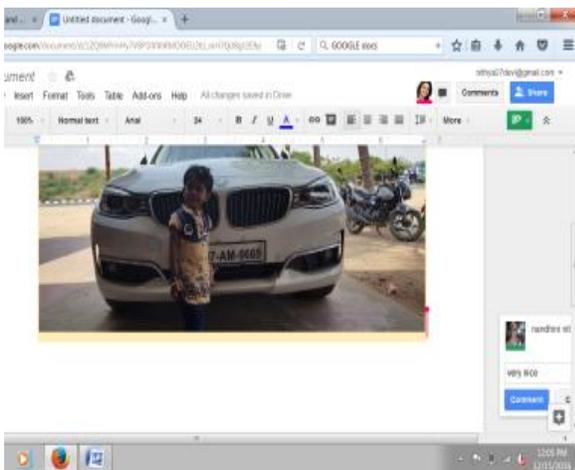


Fig. 5 Live Comments on documents

design the document collaboratively. The Assignment on “Research Paper Review” are created using Google Documents.

The students can prepare their presentations for seminar, project review and other relevant task using Google Slides.

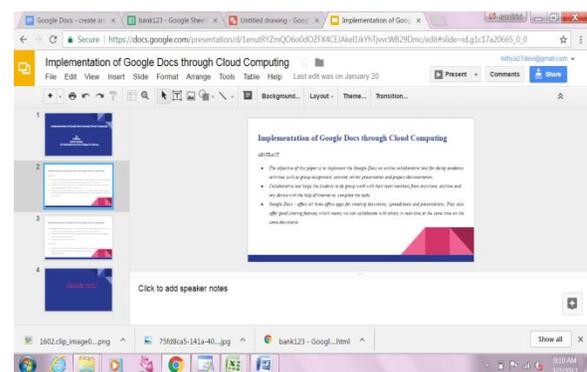


Fig. 6 Project Presentation.

In Google Sheets, the student can prepare data set for Research, perform mathematical functions and can represent graphically.

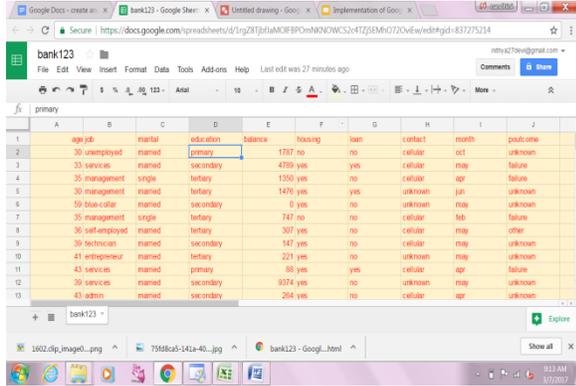


Fig. 7 Preparation of Bank dataset

Google Drawings will be helpful for the students to perform image processing techniques and other graphics manipulation.

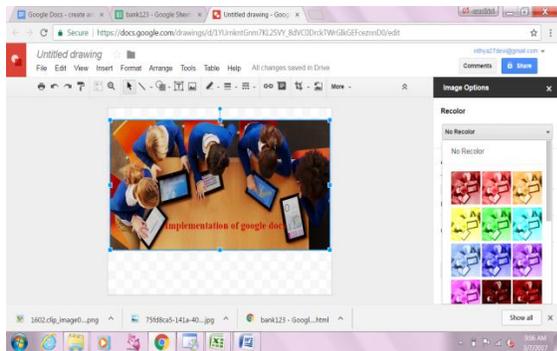


Fig. 8 Image Modification

IV. CONCLUSION

In this paper, we have highlighted the importance of Google Docs in doing the academic activities collaborately. The students academic activities such as Group Assignment Project Review presentation, Dataset preparation using Google Docs in cloud were

demonstrated in this paper. This online collaborative tool is especially useful for students to enhance the learning skills, developing the attitude of sharing among team members to achieve a common task seated at different location by using diverse devices.

Finally, one area of application we hope to exploit in future is the use of Google Docs as a tool for academic research.

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