

The Importance of Test and Student Supervision in High Schools through Web Applications

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Abstract — *This paper describes the importance of having a good high school supervision structure and of organizing adequately dates for test evaluations. Student's supervisions consist of watching that all students are behaving according to the School's Students Manual and that all rules are being followed. The main aim of this project is to establish a web-based application used for reserving test dates and for administrating student's supervisions around the school campus. Teachers can easily get their test dates reserved as well as their supervision's schedule. The recommendations from both, the teachers and the administration of Colegio San José de Rio Piedras (CSJ) have been united into this Information and Communication Technology (ICT) application. The ICT application was implemented and tested during holy week, and it proved to be an efficient and functional application. We have concluded that it has become useful for the students' learning process and a comfortable, user-friendly application for the administrators and teachers' daily routine.*

Key Terms — *High school, Supervision, Test, Web application.*

INTRODUCTION

Keeping in mind the importance of high school students' supervision and the assignment of testing periods, we have introduced a pilot ICT web-based application. This pilot is used by teachers to schedule the dates for their tests in time. In addition, they can check their supervision schedule around the school campus. The software we have prepared and introduced is called CSJ Web App [1].

This web application provides active and efficient results for the administrator user. It gives

the administrator the opportunity to easily assign teachers' supervision schedules. It allows the school administration to keep track of how frequently teachers assign test dates and how many tests students are having daily. In Colegio San José students can only have two tests per day [2]. This is why CSJ needs a functional way to keep track of the student's tests' schedule.

Until now, the process for reserving a date for an exam in CSJ implied leaving the classroom to go to the Faculty room for processing this task manually. In the Faculty room the teacher would, on a manual calendar, find an available date and select it for his/her exam. Using the CSJ Web App make(s) their daily routine easier. From now on, they have the opportunity to access the tests' calendar from anywhere, anytime they need. Due to the CSJ rule of not allowing students to have more than two tests daily, teachers are only allowed to post test on available dates. This helps them be conscious about the learning process of their students. The ICT web-based application also helps teachers to have easy access to their supervision schedules at anytime.

High school students' lives involve having assignments, tests, participating in sports or school clubs, and participate in extra-curricular activities. In order to be able to perform to their best in every one of these aspects of their lives, they need to be properly organized. It is a quite difficult job for teachers to organize each student or counsel each of them, so newly methods and tools need to be developed. Until now, students can only see their test schedule for the current week. With CSJ Web App, students are able to view their tests schedule for the upcoming month(s).

This paper is divided in various sections. Section I is the introduction. Section II is called

Supervision of High School Students. Section III is Web Based CSJ Web App Application. Section IV is named Using CSJ Web App. Section V talks about the Benefits of Web Based Application. Section VI is the conclusion, and section VII is called Future Work. In section III, Web-Based CSJ Web App Application, we are introducing the CSJ Web App; an application program that was developed taking in consideration students' views, teachers' comments and the administration's findings. At the conclusion we have described our implementation process and other development challenges.

SUPERVISION OF HIGH SCHOOL STUDENTS

In their normal learning process, students are assigned several topics by their teachers. They are also tested on their knowledge and domain on all of these topics, sometimes even on the same day. This overload can cause high school students in the United States to be under great pressure. This pressure sometimes leads to a tense environment, causing the loss of control of students or unfortunate situations. This is why adequate and well-administrated supervisions are necessary at all times on a High School scenario.

It is true that parents need to be concerned about their children status and their activity and behavior in school. But from the moment a student is left in school campus, the safety and teaching of proper behavior is the school's responsibility. Student supervision is important for making sure that they are acting properly with all classmates and others, as well as acting properly in school environment. Any sort of hazardous material is strictly prohibited in school area, so it needs to be monitored properly by a concerned teacher. If students are attending laboratory tests or similar works, the necessary safety training should be provided. Making the students aware of the Code of Conduct and safety measures is also helpful and makes the teachers' job easier [2].

There are various ways of performing a supervision. The traditional approach of watching what students are doing and making sure everything is running adequately is one way. And there are some other effective techniques for supervising any student, in which teachers have more involvement in their academic life [3]. A teacher can [4]:

- Discuss with videotape the lesson with one student every month.
- Let the student follow and observe the teaching lesson, let the student provide his feedback. He can read aloud and videotape it. Then discuss the issue together.
- Make journal with students.
- Set weekly goals for students.
- Tell the student to make a weekly lesson plan while he is observing the teacher's methods.
- Ask to make a model lesson plan for one or the lesson.
- Complete observation and obtain the findings.
- Talk to the student regularly to get his/ her feedback.
- Apply different types of observation techniques.

With these other techniques, students can be involved with data collection for increasing their engagement and supervise them from closely. The experience will teach them proper use of working materials, note taking, scripts making etc. It will also promote their creativity in their studies.

Knowing the importance of the supervisions, and sorting out the necessary and most effective student supervision techniques, we have taken the initiative to create this web-based application. This application creates a good supervision structure, which allows the administration and the teachers to keep tract of such an important aspect of CSJ High School.

WEB BASED CSJ WEB APP APPLICATION

We have implemented the web application named CSJ Web App for student supervision around school campus and for scheduling tests. It is

basically a feedback tool that allows the teacher to post any test date without ever leaving the classroom, allowing the teacher more time to prepare the test, to evaluate the students and finally to schedule other test dates. It basically connects both the teacher and students through an online environment. The frequent use of this application by both the teacher and student improves the strength of communication and immediate feedback for the learning process. Through this application, a teacher can schedule tests for any specific date and inform about future test dates. Students can get the schedule of current month tests and get ready for them. When there is a change in the test date teachers can remove the test from the schedule and create a new test date.

Students can get prepared and take their tests as they are assigned on the schedule of the application. The teacher can also cross check against the classroom test attendance data. This way they can see how many have completed the test and how many have missed it. The positive aspect of this software is that is fully web-based and do not need to be installed. One can use it from anywhere with just an Internet connection. All the information is saved in the application so it helps to track past and future information.

A meeting was conducted with members of the school administration to receive feedback on the application. Their feedback was positive. They stated that CSJ Web App is a better system than the current supervision assignment process. Teachers gave excellent comments about the application. They informed that it is quite an excellent and easy platform for reserving tests dates. They also liked the fact that they can easily keep up with daily supervision schedules. Students also gave their feedback. They liked the idea of being able to organize themselves monthly, instead of only knowing tests for current week.

In addition, when we talk about the importance of Tests evaluation we have to move towards a more complex issue. [5] In order to move to their next step in life, students need to master and demonstrate their knowledge in all of their high

school subjects. The standard way to accomplish this is by doing well in tests evaluations. Their satisfaction lie among the reward that these accomplishments will benefit them. By developing a well-crafted test, a teacher immediately knows if the student has assimilated the syllabus that has been taught in classroom.

To all extent it has been found that from the side of students, they have accepted the importance of tests in the academic life. They know that without these, they cannot get evaluated for their learning. On the other hand, the teacher also could not find out who are the most studious and potential students. But it is important to have in mind that a very overload student cannot perform as well as he/she could with a well-balanced schedule. Students need time to learn all the material for each subject. This can only be achieved with a well-organized schedule. CSJ Web App gives the students the chance to organize themselves with sufficient time, and have the opportunity to perform to his/her maximum potential.

USING CSJ WEB APP

CSJ Web App is a web-based application for assigning test dates and creating supervision turns. This sort of application can be used from anywhere; the database it uses does not need to be downloaded. It will always maintain a steady connection with it; the cost of maintaining platform is comparatively low. This is because web-based applications are developed in a similar environment, the web browser. It is true that we have to test on different web browsers, but the application does not have to be developed for every single operating system. Since we don't have to develop for every operation system, it is much easier to develop and test in a web application. [6] It is constantly up-to-date. All sorts of collaboration can be done from anywhere around the world because, by being a web-based application, it is always accessible by just having Internet connection.

Our web-based application is setup and maintained in the schools dedicated online servers, where the school in-house expert administrators maintain it.

We are going to illustrate with pertinent screen-shots of the application to show the operating process of the application properly. The link of the web application is: http://fjdqdesigns.com/school/web_school.

When we reach the application, the login page will appear where the user will enter his/her user name and then enter their password. Clicking on the Login button, user will enter the application as Figure-1.

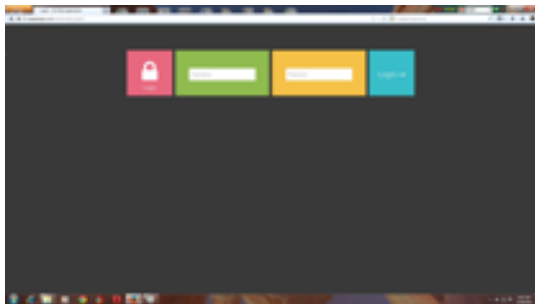


Figure 1
Login Page

Within the site there are different sections like Test Calendar, Supervision, Supervision PDF, Add New User, User Total Time, and Remove test. Each section has its own access levels for different type of users. Administrator users can access all sections, teachers can access and modify few sections and student users can only see the test calendar. This help protected our system and the school's from attacks. Figure-2 has the details on the home page of the web-application.



Figure 2
CSJ Web App Dashboard

From the Test Calendar button everyone can check the Test schedule. It is based on subjects and specific date. Both the teacher and students can check the calendar for information yet only the teacher can add new test. Figure-3 shows that the month can be searched for details. There is a daily calendar form where one can find the tests. To add a test one can select the test subject from the first dropdown and then select the date from the date-picker. This is an interactive process to get the information instantly on the application.

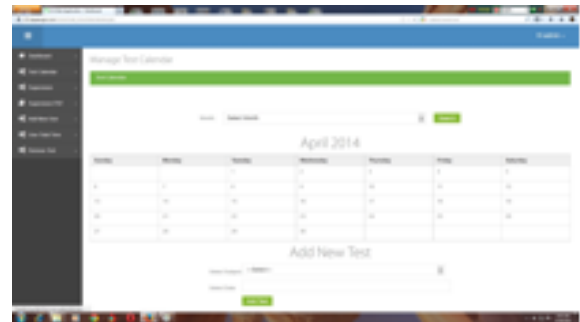


Figure 3
Test Calendar Page

The Supervision buttons allow the administrator user to add teachers to a supervision spot within a specific time set. All teachers must have the same time for supervisions. In Figure-4 we can see that there are names of user, with the spot location with a specific time. To add a teacher to a supervision spot there is an option that asks to select a time slot, and after that it asks you to select the school location and finally it asks to select the teacher to cover this spot. There is a distinction between male and female teachers, because since this is an all-boys school, a male teacher can only cover hallways with bathrooms nearby. Basically through this option a teacher can be assigned to a location of campus for supervision.

Moreover, this function is very much distinctive for the supervision of the students because when a teacher is assigned to a spot, then he or she can monitor students around personally which will enable to carry out his task properly.

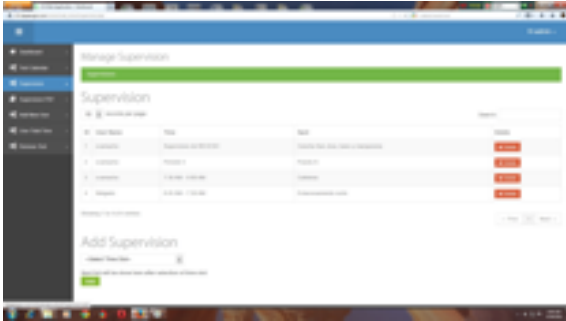


Figure 4
Supervision Page

The supervision log can be extracted in PDF format, and for this purpose there is a section named Supervision PDF [Figure-5]. After clicking a new tab open with a new PDF file with all supervisions assigned, such a file would be generated [Figure-6] which can be downloaded and kept for the record, or it can be also printed for documentation.

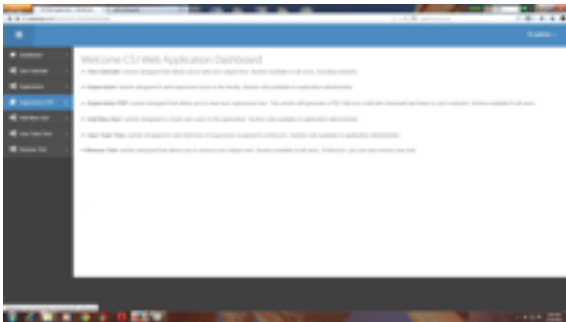


Figure 5
CSJ Web App Dashboard



Figure 6
Supervision PDF Page

There is an add new user section. It shows current users and allows to add new user, by creating a username, and password, Teacher name, gender and subject they teach. [Figure-7].

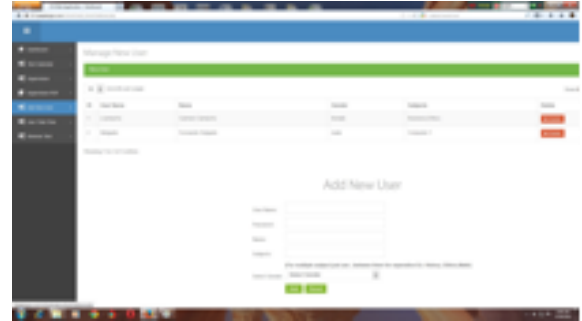


Figure 7
Add New User Page

The section of User Total Time allows the administrator user, to see what the total time for each teacher individually per spot. [Figure-8].

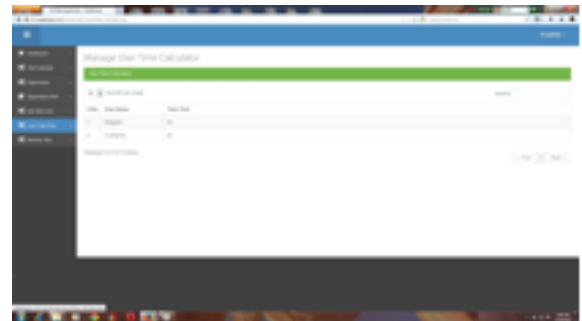


Figure 8
User Time Total Page

The Remove test section is used to remove any sort of test schedule that has been posted to the platform for student notification and it is omitted after successful classroom test takes place. If the Delete button is clicked to remove any selected test, then it is deleted [Figure-9].

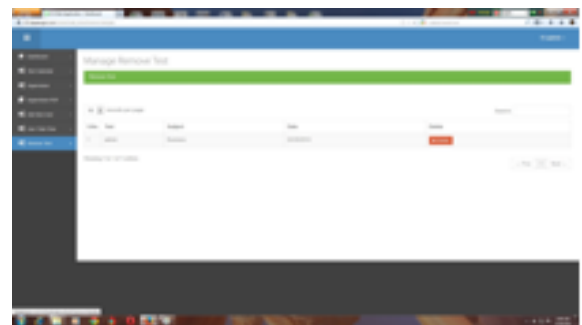


Figure 9
Remove Test Page

This application allows the teacher to schedule the test. Once it is administered, the test maybe

either archived or deleted using the remove test page.

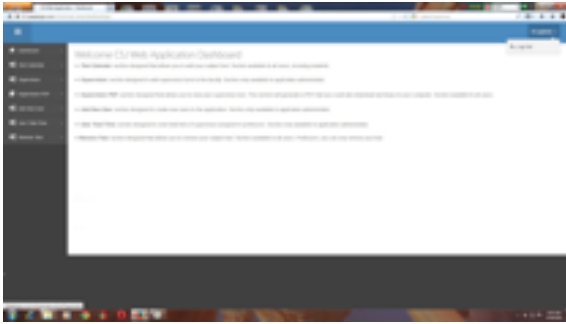


Figure 10
CSJ Web App Dashboard

All the information in the site would be saved in a server, from where it generates all the information and keep it available for the users. Even for any reason the data would not be deleted, the central server will maintain all safety measures to keep the data safe. Any user from any side of the world can log in here and get the necessary test information and even the administrator can assign a teacher to a specific spot to supervise. It is a web-based effective platform that allows keeping the students and teachers updated with a real time environment.

BENEFITS OF WEB-BASED APPLICATION

Web-based applications are easier to develop. They can be developed and accessed anywhere, being more useful for our users. Moreover, they are easy to install. Web-based applications are easy to kept secure. Also, they can expand as we do [6].

With web-based applications, users can access the platform via a uniform environment. The best example is a web browser. When the user interacts with the application we need to thoroughly test on different web browsers. The application itself needs to only be developed for a single operating system. This makes the development and troubleshooting of the web application much easier. For web applications that use a Flash front-end system, the testing and troubleshooting is even easier then.

Unlike conventional applications, web systems are accessible anytime, anywhere, through a PC

with an Internet connection, putting the users in charge of where and when they enter the application.

The user interface of web-based applications is easier to customize as it is in desktop applications. This makes updating the look and feel of the application, or customizing the presentation of information to different user groups easier.

Using latest Internet technologies based on industry-wide standards, it's feasible to achieve a far better level of interoperability between applications than with remote desktop systems. For example, it is much easier to incorporate a web-based shopping cart system with a web-based accounting pack than it is to get two proprietary systems to talk to each other. Web-based architecture gets it possible to rapidly incorporate enterprise systems, improving workflow and other business processes.

To mention the actual cross cutting issues [7]:

- Allows users to work from anywhere.
- Software database does not need to be downloaded.
- Low maintenance cost.
- There are nominal cost of ownership and maintenance.
- It is extremely scalable, as it can emerge from a very small size to bigger size in a short period of time.
- The application is always up-to-date.
- Automatically loads functions in mobile devices and files are usable everywhere there is an Internet connection.
- Collaboration is much easier than desktop applications.
- There is no specific platform needed.
- Social networking functions add an advantage.

Web-based applications are typically deployed on dedicated online servers, which are monitored and maintained by experienced server administrators. It is far more effective than monitoring hundreds or even thousands of client computers, as is the case with new desktop applications.

CONCLUSION

Today with contemporary methods, teachers meet the students once or twice during their classes. Through these sort of Web-based program teachers can help students with learning process. The most challenging job of the teacher would be to post test information there and administered them in classroom properly.

Some teachers have participated in the pilot project phase to make it useful; they have shared their knowledge and expertise. On the other hand the reply from students has also been taken under consideration. Teachers said that it was easy to use but difficult to follow-up weekly. Proper utilization of reports generated from here can be used later. It was an efficient utilization of advanced technology.

Being the project developers, we have considered all these issues to integrate the program to a learning environment that would be used for education institutions. In this case, there would be no need to use separate user identification. On different aspects the usability of this program is good.

The purpose of web-application development was not to examine features of the CSJ Web App software but its benefits for better learning. The test phase of the project has been really encouraging for it indicates that the project needs further development.

FUTURE WORK

Additional attention should be paid to the software features, as user-friendliness, better reporting, and accessibility. We believe this type of application can be an effective supervision method in all fields of education.

In the future, this application will help the teachers keep track of the tests assigned. They will be able to know if the tests were given. Also they will know how many tests were given in a month, and yearly. This application will also be helpful to create tests and distribute them electronically. Finally it would provide a tool to grade tests and give feedback to students.

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