

## Purpose, goals, and objectives of the test

---

School Resource Manager (Version 8) is web application developed and maintained by VRL Software. It has been deployed for use at a number of Jamaican schools. The tests will be performed on teachers using the implementation at Queen's High School, a female only institution located in the Kingston, St. Andrew. The goals of this study are to:

- Assess the effectiveness of the application for performing tasks such as entering grades, viewing reports, etc.
- Identify obstacles teachers of different computer/web skill levels experience during common tasks.
- Identify if a teacher could complete their tasks successfully without instructions.

## Research questions

---

In addition, this study will try to answer these questions:

- How easily do users understand what is clickable?
- How easily and successfully do users discover the path/steps to complete their task?
- How easily can users return to the home screen?
- How well do users understand the symbols and icons?
- Which ones are problematic? Why?
- How quickly can users perform common tasks?
- Do the task processes match the teacher's mental model of the task?
- Do users use the toolbar icons or the standard menus? Why?
- Is the response time a cause of user frustration or errors?
- Does the interface satisfactorily meet Nielsen's ten usability heuristics<sup>1</sup> for user interface design?

I'll also have qualitative data:

- The verbal protocol – the running commentary that participants make as they think aloud – will give us indicators about what participants were confused by and why
- Debriefing interviews will tell us what stands out about the experience of using the site, which should help us set priorities on potential changes to the site

---

<sup>1</sup> (Nielsen, 2005)

## Location and Setup

---

The teachers are allowed to access the application outside of the premises, however for the purposes of the study, tests will take place in a controlled setting at the Queens High School, Kingston, St. Andrew.

Participants will use a Windows PC, with Internet Explorer, the browser required for using the application. The PC that the participant uses will also have Morae recorder installed on it and a web camera attached. The web camera will capture the participant's face; the Morae software will record what's happening on the screen (and can collect other data). I will also be taking photographs and audio recordings of the sessions.

## Participant characteristics

---

Participants will be selected from the teaching staff of the Queens High School. 4-6 Participants will be recruited according to their experience using the application. They will be divided into tiers:

Participant Type	Description	# of Participants
Novice/Beginner	New teacher at school or teacher who has never used the application.	2
Intermediate	Intermediate users are those who meet neither novice or expert	2
Expert	Expert users' names will be provided by the application administrator at the school.	2

## Method (test design)

---

The usability study will follow a script that instructs the teacher to perform their common tasks. I will collect qualitative data about the participants' experiences using the application.

I will use the **within-subjects design**. With this test, all the users perform the same test. Learning transfer effects are minimized, since the application is not new to our intermediate and expert users; as such counterbalancing is not absolutely necessary. I'll use 15 minutes of each session to explain the session to the participant, review basic background information with the participant, and then conduct a post-test debriefing interview. During the session they will perform the activities in the task list. Sessions should be 30-45 minutes in total.

### Pre-test arrangements

Have the participant:

- Review and sign nondisclosures and recording permissions.
- Fill out a background questionnaire (with the same questions as the screener).

Introduction to the session (2 minutes)

Discuss:

- Participant's experience with usability studies and focus groups.
- Importance of their involvement in the study.

- Moderator's role.
- Room configuration, recording systems, observers, etc.
- The protocol for the rest of the session.
- Thinking aloud.

Background interview (3 minutes)

Discuss the participant's:

- Experiences with computers.
- Experiences with similar applications.

Tasks (30 minutes)

Participants will perform the activities outlined in the task list.

Post-test debriefing (10 minutes)

- Ask broad questions to collect preference and other qualitative data.
- Follow up on any particular problems that came up for the participant.

## Task List

---

1. Login
2. Mark Register for:
  - a. one class
  - b. same class as above, different stream
  - c. another class, unrelated to the ones above
3. Enter subject grades for:
  - a. one class
  - b. same class as above, different stream
  - c. another class, unrelated to the ones above
4. Add to student profile/record:
  - a. Form teacher/coordinator comments.
  - b. Detention
  - c. Suspension
  - d. Merit/Demerit
5. View Student Report

## Task Scenarios

---

1. You teach multiple classes. Two grade 10 English Literature classes, and a grade 9 English Language class. Please perform the following tasks.
  - a. From the main screen, please mark the register for one of the Literature classes.
  - b. From the current screen, please mark the register for the remaining Literature classes.
  - c. From the current screen, please mark the register for the 9<sup>th</sup> grade class.
  - d. A student came late to the 1<sup>st</sup> literature class, please update the register entry for that student.
2. Students have just completed their mid-semester exams, and you are required to record their grades.
  - a. Please enter grades for a class that you teach multiple streams.
  - b. Based on the class selected in task 2a, please enter grades for another stream.
  - c. From this screen, please select another class who has completed mid-semester exams and enter the grades.
3. A student was rude to you in this morning's homeroom session; please record this incident, and give the student a detention.
4. A student has red highlights in her hair, which is against the rules for high school students, please assign her a demerit.
5. A group of students were caught cheating in the mid-semester exams, please give them all 3 days suspension and 3 demerits.
6. Please assign 3 merits to the student brave enough to point out the incident outlined in task 5.
7. The semester has come to a close and parents must receive their children's report. Please create the reports for the classes you are responsible for.

## Report contents and presentation

---