

## Performance Analysis Submission

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I have accomplished the following tasks and certify that my performance analysis is ready to submit.

- I have “spelled-out” all numbers less than 10 and any number at the beginning of a sentence. Numbers 10 or greater, when not at the beginning of a sentence, are presented as numerals.
  - I have “spelled-out” all acronyms on the first use. For example, “... the students attend San Diego State University (SDSU).”
  - I have not ended any sentences with a preposition.
  - I have referenced *job aids*, not “job aides”.
  - “Active voice is used throughout my report”... rather than, “I have used active voice throughout my report.”
  - “I have read through and checked to see if I can possibly remove and/or eliminate any words that don’t add into what I’m attempting to communicate to the audience reading my paper”... or... “I eliminated words that don’t contribute to my key points.”
  - In sum, I have proofread my paper and addressed all grammatical, spelling and phrasing issues.
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- I have used the rubric categories to organize the sections of my paper.
- I have analyzed, synthesized and summarized my data. Raw data, if used, is employed as examples to support general findings.
- General references are quantified with *data*.  
For example: “*Many people felt the procedure was difficult to remember or hard to perform.*” This statement needs data.  
How many is many? And, how many are lacking memory vs. having difficulty performing? If you’re going to prioritize your solutions (meaning implement the ones that give you the most bang for the buck), you need to know not only the problems – but the size of each.
- My paper is three pages. Note: appendices are not included in the three-page limit.
- My paper’s three pages stand on their own. If an appendix is included, it provides additional detail. Reading the appendix is not requisite to understanding the three-page performance analysis report.
- I have named my document *mylastname.PA.doc* – where *mylastname* is replaced with your unique last name. Files that are not named in this format will be returned for revision.

My initials, entered here, indicate I have performed each of the preceding tasks: AV

# **“Tech-ing” Your Way to a Functioning Presentation System: A Performance Analysis**

## **Introduction**

Teaching classes with multimedia and computer technology can be such fun! Well, fun if the computer equipment used to teach in the classroom functions as expected. Otherwise, an instructor can feel a hole burning in their forehead by the eyes of waiting students in the classroom. Instructors using Smart Classrooms (classrooms that utilize multimedia and computer equipment) at San Diego State University (SDSU) frequently encounter computers appearing to be unresponsive/frozen when trying to set up their presentations in these rooms. While the procedure to restart a frozen computer is part of the training process an instructor receives in order to use a Smart Classroom, 10 out of 21 call logs to my help phone line recorded over one week’s time were from instructors unsure of what to do in order to get the computer up and running. In addition, 9 out of 10 of these calls came from classrooms that recently had their computers replaced with Mac Mini desktops (Smart Classroom List, 2009) by SDSU’s Instructional Technology Services (ITS).

In this analysis, I will identify the barriers preventing the instructors from restarting a frozen computer, as well as how the installations of new computers are also having an effect. I will then craft a solution system that will best tackle these barriers and enable the instructors to more efficiently utilize the Smart Classroom equipment so they do not feel like dummies in front of a roomful of students.

## **Where Did I Get THAT Information?**

In order to obtain relevant data, keeping a phone log of how many problem calls were involving an unresponsive/frozen computer was important. As noted above, just about half of all problems deal with this issue and this shows how much the problem is worth pursuing. I also chose to interview six instructors from the College of Professional Studies and Fine Arts who regularly teach in Smart Classrooms. This group of people are my target audience who are directly involved with the equipment problems addressed. Two are female and four are male, all six (100%) are tenure/tenure track faculty members, and four out of six (67%) have been teaching at SDSU for over seven years. All six (100%) are between the ages of 40 and 60, and have previous training.

Additional information from the ITS website is also used to verify what type of equipment is setup in the classrooms. Another source from ITS is an Equipment Systems Specialist who has information on what notification is sent to instructors alerting them to changed classroom equipment.

## **Gap Analysis**

Optimally, the instructors would be able to experience and perform the following:

1. Be able to set the keyboard/mouse switcher to either PC or Mac
2. Be able to locate the computer’s power light indicator to determine if it is ON or OFF
3. Be able to locate the monitor’s power light indicator to determine if it is ON or OFF
4. Be able to locate the computer’s power button
5. If computer’s power light is ON, be able to tap on the keyboard or move the mouse to wake it from sleep mode

6. If power light is OFF, be able to turn the computer ON by pressing its power button
7. Be able to restart the computer if frozen by pressing and holding its power button for five seconds, then proceeding to turn it ON by the same button
8. Be able to identify any changes to computer equipment
9. Request additional training when they are using new equipment

The chart below lists some optimal and the performance of those interviewed.

Performance	Instructor data
Able to locate power button on computer	Five out of six (83%)
Able to locate power button on Mac Mini computer	Two out of six (33%)
Able to restart a computer if frozen	Three out of six (50%)
Able to restart a Mac Mini if frozen	One out of six (17%)
Received notification regarding replacement of computer with a Mac Mini	Zero out of six (0%)
Request additional training with new equipment	Two out of six (33%)

Conducting a gap analysis here shows that most instructors are actually pretty comfortable with locating a power button except when it is the power button of a Mac Mini computer. There is also a bit of a gap in regards to knowing how to restart a frozen computer, and an even larger gap in knowing how to restart a frozen Mac Mini. All of this indicates that the instructors do not have the proper knowledge to restart a frozen computer or turn a Mac Mini off and on. There also appears to be a lack of information alerting instructors to changes in equipment. One instructor told me, "I thought the computer had been stolen!", when she went to teach and did not see the familiar PC tower in the podium. Consulting the ITS Equipment Systems Specialist I found it was in fact replaced the day before with a Mac Mini, which is much smaller in size. According to the Specialist, they did not send out an email or other notification regarding this change.

### Causes and Getting Crafty with Recommendations

Driver/Barrier	Instructor data	Implication
Skill/ Knowledge	<ul style="list-style-type: none"> <li>• Four out of six (67%) are unable to locate power button on Mac Mini.</li> <li>• Five out of six (83%) are unable to restart Mac Mini when frozen.</li> </ul>	Clearly this is a lack of skill/knowledge that prevents the instructors from getting the computer functional on their own.
Environment	<ul style="list-style-type: none"> <li>• Six out of six (100%) did not receive notification of equipment change.</li> <li>• Three out of six (50%) do not feel there are effective labels on the computer equipment.</li> </ul>	These are out of the hands of the instructors yet contributing to their confusion in recognizing how and where to power the computer. They feel they could perform well if they had better guidance.
Motivation	<ul style="list-style-type: none"> <li>• Five out of six (83%) said they lost class time due to tech problems.</li> <li>• Four out of six (67%) felt they lost the attention of their students.</li> </ul>	Their value is high in order to avoid these things, but it seems their confidence in restarting the computer is low, which results in overall low motivation.

Driver/Barrier	Instructor data	Implication
Incentive	<ul style="list-style-type: none"> <li>Three out of six (50%) said when they call for help someone will show up and fix the computer for them.</li> </ul>	The instructors end up being rewarded for not knowing how to perform as desired because of this. They prefer to continue lecturing and not worry about learning how to solve the problem since it can be done for them.

### Solution System

Driver/Barrier	Solution	Justification
Skill/ Knowledge	<ul style="list-style-type: none"> <li>Job Aid</li> <li>Supplemental Training on New Equipment Installations</li> </ul>	A job aid, with photos, listing the optimal steps for restarting a frozen Mac Mini computer will aid them in class. Also, attending a training session to learn about the key changes made to the equipment will help them avoid "surprises".
Environment	<ul style="list-style-type: none"> <li>Provide more explicit labeling on computer equipment.</li> <li>Send email with photos of newly installed equipment to all instructors of that Smart Classroom.</li> </ul>	Create and implement labels with clearer verbiage, such as "Power On" to denote power button. Email notification will clearly state and show what changes they can expect in the classroom.
Motivation	<ul style="list-style-type: none"> <li>Explain to instructor during supplemental training the consequences to them not learning proper performance.</li> </ul>	Confidence is low, but the value of preventing loss of class time and student attention is high. This value will remind them to learn about the new equipment in order to gain confidence.
Incentive	<ul style="list-style-type: none"> <li>When assisting the instructor in their class, ask to take them aside for a few seconds to demonstrate how to go about solving the issue.</li> </ul>	Performing the task for the instructor is a flawed incentive. It prevents them from learning what to do to perform as desired.

### Conclusion and Role of the Job Aid

Reviewing the data from the instructors, I have crafted a solution system which includes supplemental training, a job aid, email notification of equipment changes to instructors, and a better labeling system for the classroom equipment.

A job aid of the steps, including photos for visual reference, that are involved in checking for and restarting a frozen computer will be most useful to the instructors while in the classroom. This job aid will eliminate the skill/knowledge deficiency they were previously showing and allow the instructor to quickly get the computer functioning even while under the pressure of students' watchful eyes. This will result in much less class time lost, student attention kept, and a much more enjoyable lecture experience for all!

## Appendix - References

### Websites:

Spring 2009 Smart Classroom List (2009).

Retrieved February 20, 2009, from Instructional Technology Services – San Diego State University: <http://its.sdsu.edu/docs/SmartClassroomSpring2009.pdf>

An Inside Look at the 2008 Smart Classroom Cabinet (2008)

Retrieved February 24, 2009, from Instructional Technology Services – San Diego State University: <http://its.sdsu.edu/multimedia/cabinet/index.htm>