

The Electronic Classroom

Michael Perry

National Board Certified Teacher in Career and Technical Education Business Teacher, East Paulding High School, Paulding County Georgia Adjunct Business Professor, Kennesaw State University









School or Home – The Offices look the Same



The Paperless Office

- Just a theory that is not here yet
- Computers actually increased the paper instead of diminishing it
- It is easy to print many, many copies of the same sheet



Paper Problems



I hate filing I hate filling out paperwork by hand I don't write legibly

I hate paper that students turn in odd little sizes Origami?







Freedom -- taming the paper tiger • Free yourself from the paper Remove the burden from your back.

Problem #1 – Too Much Paper 💅

- Every student intervention is a component of that student's file
- Eliminate the paper burden and solve problem #1
- Requires risk taking and a climate for change







Current Practice

• Instructor loses the "teachable moment" to immediately clarify the concept for students



Ideal Practice

- Assessment closely linked to instruction by either occurring:
 - Immediately following instruction
 - During the instruction
 - -Both
- Formal assessment in this manner has been difficult because of recordkeeping requirements

Challenges

- Need for precise real-time information to assess student progress and content mastery
- 00 00 00 00 00 00 00
- Need for precise information regarding student's individual and class performance over the instructional term
- Need for a solution to the increasing amount of time devoted to recordkeeping for accountability

Instructional Opportunities

- Use technology to incorporate assessment into or immediately after instruction
- Provide the Instructor with data whether the students are "getting the concept" or not



Instructional Opportunities

Allow for immediate reinforcement and reteaching of difficult concepts

- Allow instructor to move at the pace of the students and not a predefined "average" pacing
- Allow less time spent on "scoring" assessments



CPS – How it works

- Uses an infared input device shaped like a TV remote
- A Saucer sensor pick up the input from the keypads
- Stores an electronic record of each student's answer for each question

CPS – How it works



• Students see the questions via an LCD projector and know that their answers have been recorded

• When the question is closed – the answers percentages are tallied on-screen with the correct answer being displayed.

Instructor Impact Instruction Simple Solutions. Real Results • Receive timely feedback on their comprehension of class material

- Break up the traditional lecture by allowing the teacher to ask questions and get class feedback that can be stored and analyzed.
- Have "fun" learning by using innovative technology for assessment the "cool" factor

Eliminate anxiety over how well they did – Inform them of the areas in which they need more practice or study time

Instructor Impact

eInstruction Simple Solutions. Real Results

- Get real-time feedback for instruction using assessment during and immediately after instruction.
- Garner support from students knowing that they are assessed fairly on material taught and learned
- Eliminate a portion of the paperwork burden for assessment
- Role-model practical use of technology for students

Histogram Data Analysis— Expected Normal

- Reports can be generated to show
 - Analysis of each assessment item
 - Individual graded test with questions and answers
 - Class grade report
 - Missed items for students to study that are individual and not based on the class average
- Export grades and data to Excel







Creating a Website

- Early use of a simple website to distribute notes and information to university students
 - Done for mostly for the convenience of the instructor
- Research the needs of customers
 - Survey university students
 - Survey parents and high school students
- Next add notes and information for students/parents at the high school level



Site Redesign



- Redesign site based on Survey information
- Add graphics
- Improve navigation
- Time frame for the process 3 years and 4 site versions





Content Management System

- Latest design of the site features content management system
 - Influenced by ideas of industry products such

GEORGIA



as

- Needed a custom designed site because of instruction in multiple learning communities
- Different IT support at high school level as compared to the University level

Current Site



- Site developed in two years with support of two high school students
- Site programmed in php with a MySQL database
- Site secured with password and encryption in the custom written code
- Students login and receive daily instructions for each of their classes

Current Site

- Students are presented projects listed as assignments delivered on the site.
 - Projects have start/end dates
 - Projects must be submitted online and cannot be submitted after end date
 - Projects are posted to website and named according to an established protocol
 - Email is sent to both student and instructor confirming submission



Problem – Guilty until proven drogon (Innoc

· Today's political climate requires that you prove you have done your job in assisting the studen

ent
A tough Audience 1 Audience 1 Aud





• Recordkeeping chores continue to expand to meet the accountability standard

Challenges

- Limited access to school records that include contact information for teachers
- Records are kept in a central office or with counselors making immediate parent contact difficult
- Limited access to telephones to make these contacts



Solving problems



- Create an electronic database system to eliminate the paper and document student interventions
- Such a system with uniform forms that is easy to use will reduce paperwork time
- Less time on paperwork means more time to work with students

Items to Remember



Organize, Organize, Organize

Standardize, Standardize, Standardize

- Make it easy to use
 - Automate routine items with checkboxes, radio buttons and drop down lists

Organizing the Paper

- Create a system that will:
 - Document Student Observations
 - Document Student Interventions
 - Document Conference Notes
 - Document Phone Calls
 - Document Emails
 - Document Grade Reports
 - Document Grading Rubrics
- Keep all records in one place at your fingertips

Databases

- Databases pose the most reliable solution to the problem
- Many databases are available
- Most have a steep learning curve
- No off the shelf system exists
- Any current contact management software would be like the souvenir t-shirts that really say one size fits few



Database Requirements

- Drop down menus
- Forms for student conferences
- Forms for parent conferences
- Forms for email support
- Student ID Picture support
- Work with Excel
- Work with other Office Products
- Expert base for help

Database Solution

- Databases considered:
- Microsoft Access
- Microsoft SQL Server – Harder than Access and more \$
- Micorosoft Visual FoxPro
- Quickbase



Teacher Reporting of Accountable Contact Support

- Developed by Michael Perry and Michael Goynes to store contact information and contact records
- Developed in Microsoft Access
- Confidential information added by the user
- Contacts are then logged by the user
- Reports generated for contacts by the user





Database Requirements

- · Easy to Use
- Easy to program for the non-programmer
- Multi-platform solutions
- Develop executable solutions
- Work will with Graphics
- Work with Excel
- Work with other Office Products
- Expert base for help
- Templates available as a starting point for solutions



Project Development

- Developed from an existing template that was modified
- Began with Student Info Card
- Added ISS Assignments module
- Added Grade Contract module
- Added Intervention Form
- Added Summary List to follow students who are not currently successful

FileMaker

Scripts and Functions

- Standardized design and folder naming
- Setup a picture folder and named pictures with ID field
- This allowed for a script to be created to show student photos
- Created folders for each student
- Created a link to each student folder
- Student folders contain progress reports, grade rubrics, emails as Acrobat files

T.R.A.C.S. (Teacher Record of Accountable Contact Support)

- A database to hold all of the support for students in your courses
- Email and Responses
- Grade reports stored as pdf's in student folders
- Classroom observations
- Phone call notes
- Conference notes
- Colleague or Team Collaborations
- Discipline Referrals

Paradigm Shift

- Hard to do as we are all creatures of habit
- Requires examining current processes and procedures
- Requires flexibility in looking for innovative solutions



Requires teachers to leave the comfort zone





Let's Dream for



- A system that simplifies grading
- A system that files and stores student assessments
- A system that is portable
- A system that is multi-platform
- A system you can tailor to your needs

Rubric Grading Database

- · First project completed with Filemaker
- Gained experience to tackle the more complex TRACS system
- Incorporated some design elements into TRACS
- Share common student picture folder
- Share common student electronic folders

Benefits



- Automate grading of student assignments
- Standardize grading of student assignments
- Catalog the results of student assessment
- Provide written feedback for students
- Electronic import the scores into Gradebooks
- Using scripts and pdf maker in Filemaker to file student grade reports and email them to students

