1,300 Students Must Complete Our Interactive Library Tutorial

Presented by

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Instructional Initiatives Librarian
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**Pennsylvania College of Technology – Madigan Library
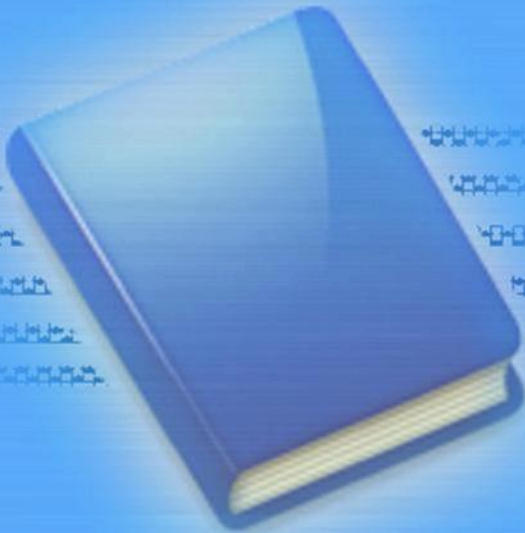Williamsport, PA**

April 18, 2008
Integrating Library Services Into
A Learning Management System
The College at Brockport
Brockport, NY

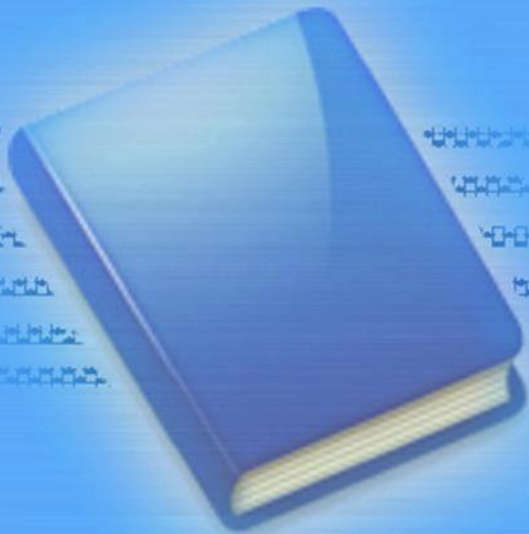**Pennsylvania College of Technology**
PENNSTATE

Penn College Fast Facts

- 6,213 FTEs
- 6,682 head count
- 85% full time students
- 41% in a Bachelor's degree program
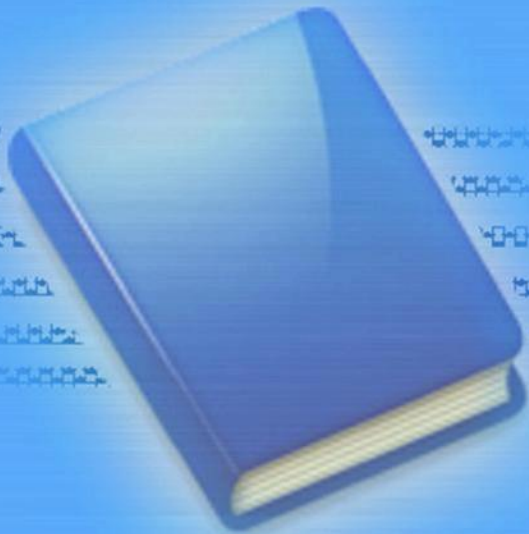- 54% in an Associate's degree program

Fast Facts About Fall 2007's English Composition (ENL111)

- 1,288 students took ENL 111 (final number)
- 56 ENL111 classes were scheduled
- 28 instructors taught these classes
- 6 full time librarians collaborated with them
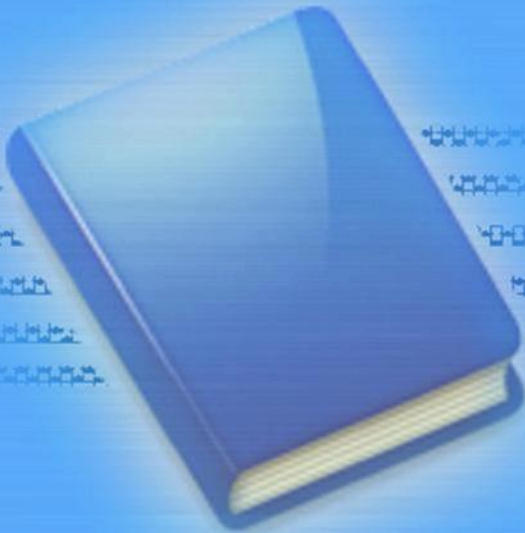- 2 part-time librarians collaborated with them

# Develop The Students' Information Literacy Skills: Our 3-Tier Process

- Review the interactive Library Tutorial
  - Answer quiz questions within the tutorial
- Complete a graded library assignment
- Come to class and link concepts learned through the tutorial and assignment to the ENL111 assignments

Joint Competencies

- Write a research statement or research question
- Create a list of searchable words from the research question
- Use the AND concept
- Evaluate the reliability of resources found
- Use a library catalog to find a book
- Use the call number of the book to locate the item on the shelf

Joint Competencies (cont.)
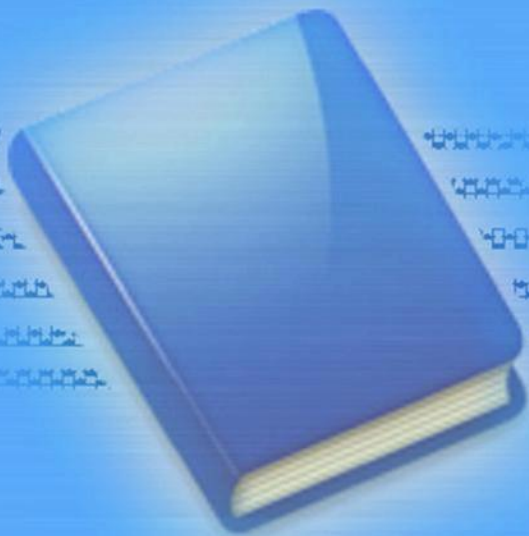
- Identify and use appropriate databases to find information
- Retrieve the appropriate articles
- Use a search engine to locate sources of information
- Identify parts of a citation
- Detect plagiarism
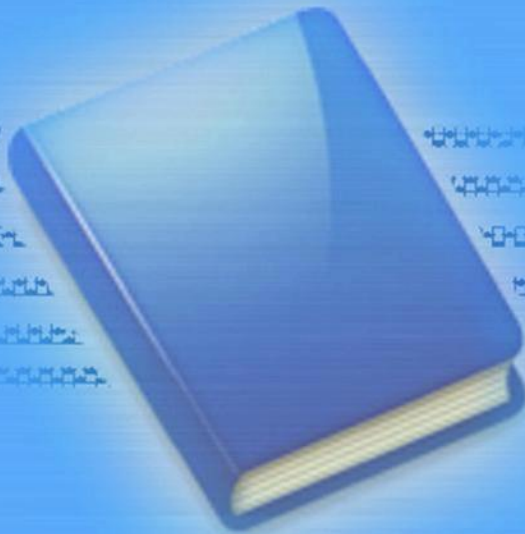
"Needs Statement" Challenges:

We wanted…

- More interaction by users
- More images or illustrations
- Clearer explanations
- More immediate feedback
- Consistent quality of instruction
- An electronic grading system
- Students to be allowed to re-take the quiz
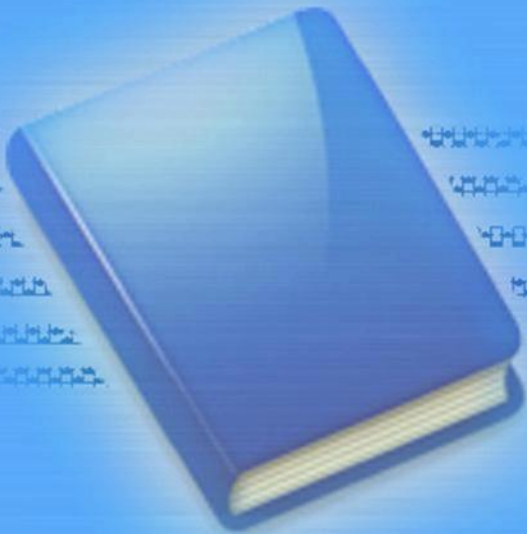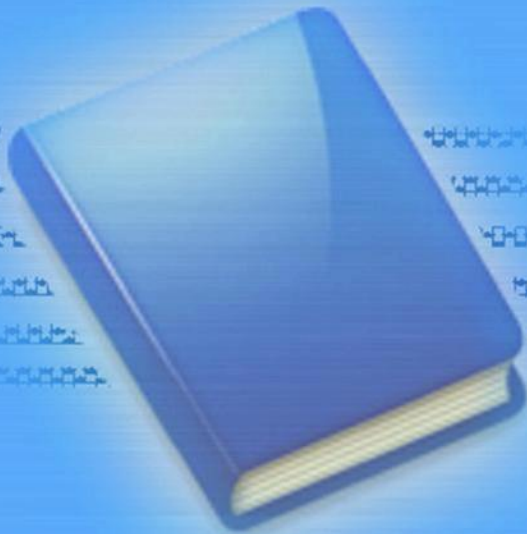
"Needs Statement" Challenges

We wanted…

- A "Certificate of Completion" printed upon completion of the tutorial

- The Library Assignment printed upon completion of the tutorial

- The tutorial available to the visually impaired, eventually

More Challenges...

- Make the tutorial available on the Web through the efforts of the ITDL (Instructional Technology and Distance Learning) Department
- Do all of the above cost-effectively
- Make the tutorial shorter
- Make the tutorial more fun!

Design Considerations: Producing a Solution

Student Perspective
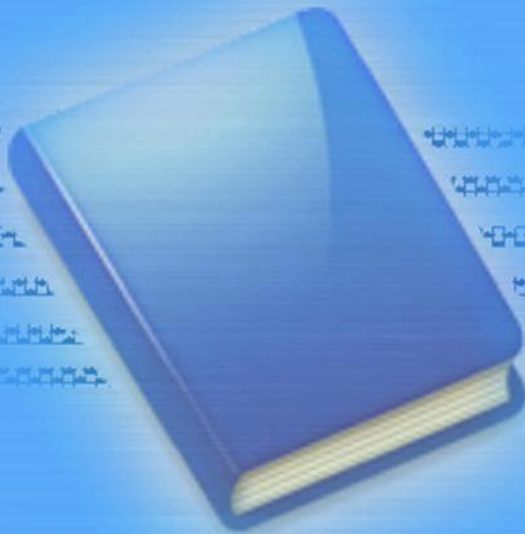
- Students live in a world of constant interaction between learning and leisure
- Students are "digital natives." They have grown up in a media world, in an online world
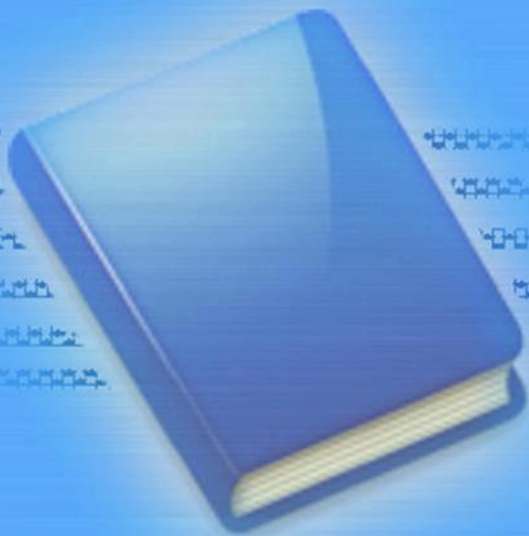
The Solution

Flash it is!

- Create an interactive learning experience

Why "Flash?"

- We wanted students to open *one* program, not many programs simultaneously
- Flash connects to all printers
- Flash calls other programs to run back-end processes that increase its functionality
- We wanted the tutorial to be Web browser/operating system independent
- We wanted the program to be accessed by about 1300 students per semester.

Why "Flash?"

Using "Flash" with the WebCT/Angel platform, it allowed us to...

- Make text move on the screen, literally
- Use animation
- Use sound
- Require responses to be interactively typed
- Mouse over graphics
- Take a quiz
- Give immediate feedback for correct/incorrect responses
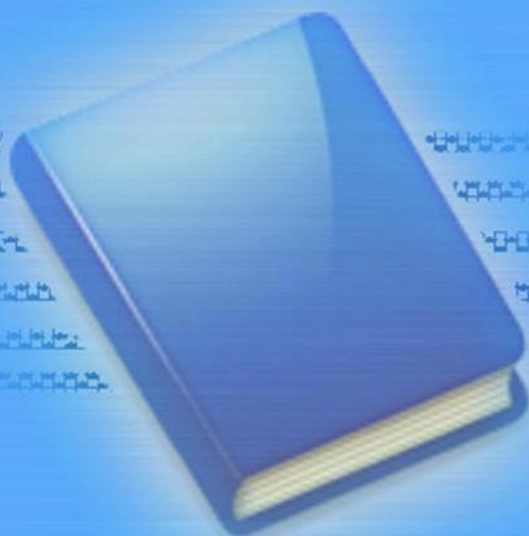
Move Text - Example #1:
The Research Question

- The tutorial illustrates how to generate a list of words to search from a research question.

Where can I find resources about a career in the information technology industry?

What are the key words in this question?

Example #2: Old Boolean Logic Format

Use Animation – New Format to Illustrate Boolean Logic
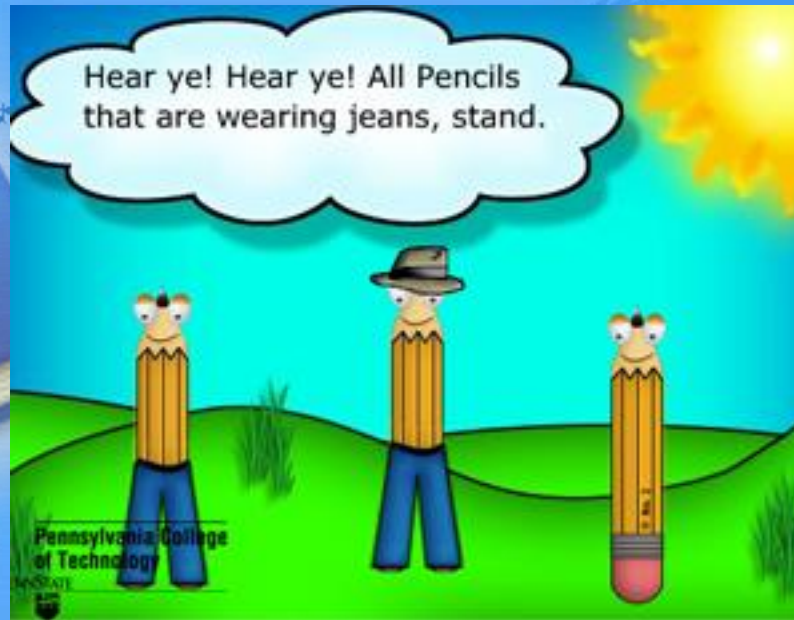
Type Responses - Example #3: Apply Boolean Logic When Searching (Catalog, Database, Search Engine)

Mouse Over Graphics - Example #4: Find a Book on the Shelf

Take a Quiz - Example #5:
A Quiz Question

Assessment

- Present the concept
- Immediately test for understanding
  - Used multiple choice questions
  - Immediate feedback given for right or wrong answers
  - Quiz was within the tutorial, itself, not independent of the tutorial
  - When the quiz was finished, a grade was produced for the student

Assessment: Get Grades Many Ways

Assessment: Get Statistics per Question per Track

Basic Seach | Advanced Seach | Correct Answers | Specific Answers | Average Grade
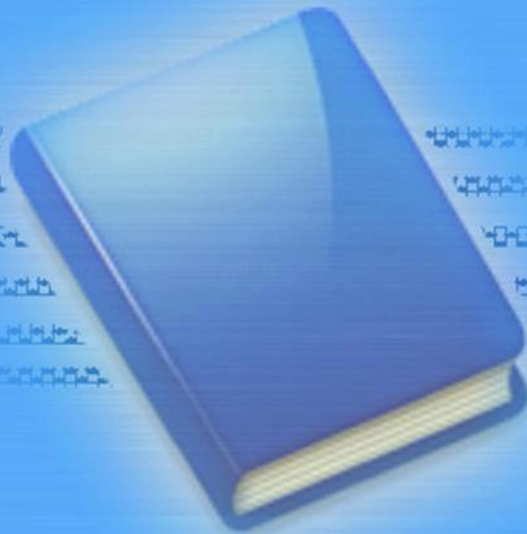
Password: ******** Semester: Fall 2007

Use the menu items below to select the data that you wish to retrieve.

This is a specific breakdown of the number of times each question was answered 1, 2, 3 or 4.

Results are organized by response number (far left column) and track.

Grey shaded boxes are correct answers

Get Results

Student Answer Number	Track	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	Information Technology	25	279	278	115	1	276	74	9	288	93	292	255	59	34	206	91	283	211	295	281
	Construction	4	344	349	164	1	353	92	8	360	11	371	326	61	146	115	134	347	303	371	353
	Healthcare	2	334	362	169	0	345	100	18	373	29	374	319	37	105	235	111	351	287	373	352
	Engineering	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Food Services	0	80	83	45	0	81	22	4	85	37	84	71	11	13	51	17	82	71	87	81
	Human Services	0	76	78	41	0	75	20	2	81	40	81	70	19	15	38	32	75	60	82	77
	Landscaping	2	96	109	57	1	108	30	5	112	8	114	99	16	35	55	31	106	90	115	105
2	Information Technology	7	17	18	181	295	20	222	287	7	178	6	43	236	17	63	207	15	87	3	17
	Construction	50	31	26	211	374	22	283	367	15	238	4	49	311	28	74	241	28	72	4	22
	Healthcare	75	43	15	208	377	32	277	359	4	247	3	58	338	18	51	266	26	90	4	25
	Engineering	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Food Services	12	7	4	42	87	6	65	83	2	39	3	16	75	11	20	70	5	16	0	6
	Human Services	18	6	4	41	82	7	62	80	1	34	1	12	58	16	38	50	7	22	0	5
	Landscaping	12	20	7	59	115	8	86	111	4	65	2	17	98	59	55	85	10	26	1	11

Average Tutorial Quiz Grade is...
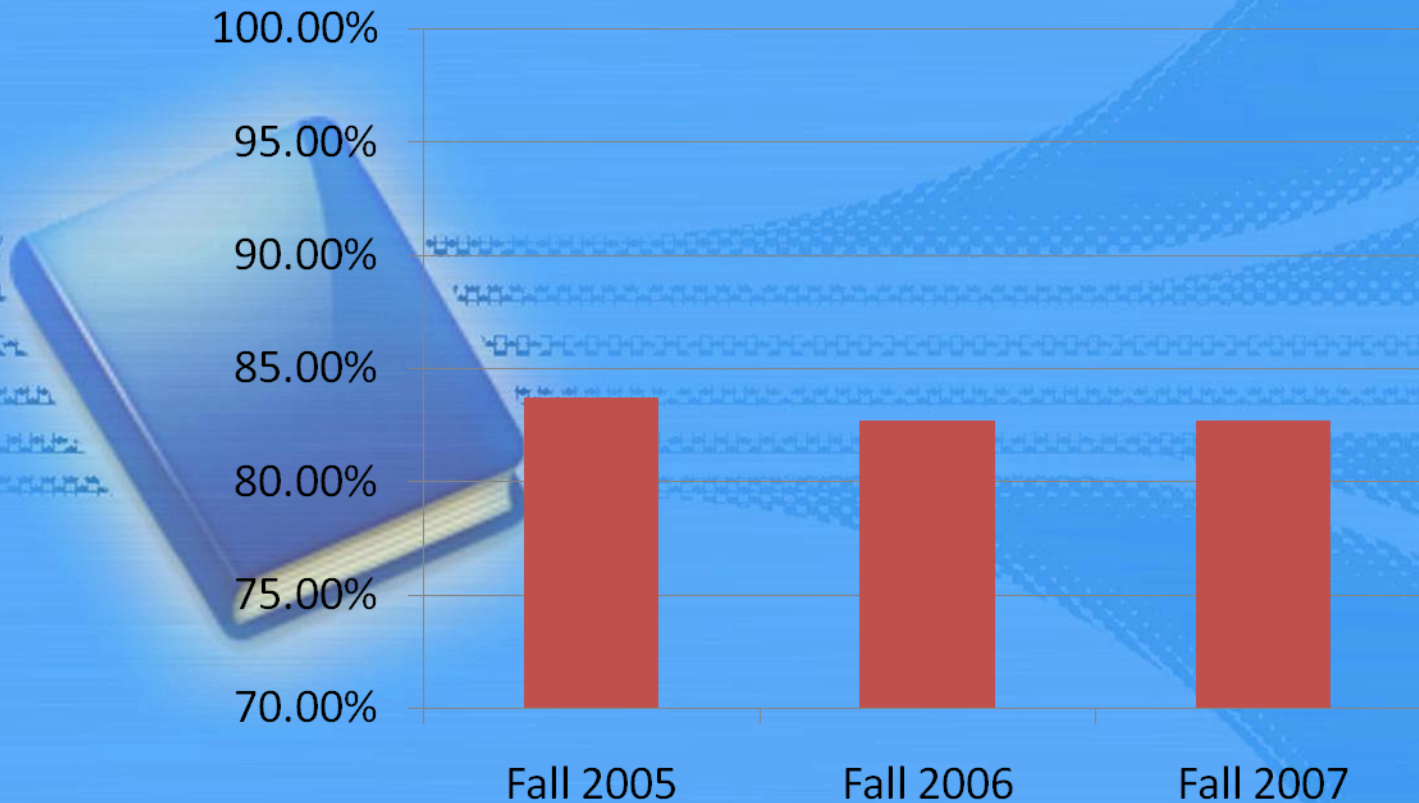
Any Correlation of Tutorial Quiz Grade & the Student's Final ENL111 Grade?

- Minitab (Version 15) was used
- 1,022 grades were inputted
- Pearson correlation of the tutorial quiz grade and student's final grade = + 0.207 (the r value)
- P-value = .000 means there is strong evidence to reject the null hypothesis of no correlation in favor of the alternative hypothesis of a positive correlation

Any Correlation of Tutorial Quiz Grade and the Student's Final Grade? (cont.)

- In English, that means there is sufficient evidence to show that there <u>is</u> a positive linear relationship between the quiz grade, x, and the student's final grade, y.

- R^2 (the coefficient of determination) = $.207^2$ = .043 which means 4.3% of the variation in final ENL111 grades is accounted for or predicted by the tutorial grade

Trends in Grades

Legend:
- Final Grade f
- Final Grade d
- Final Grade c
- Final Grade b
- Final Grade a

X-axis: Tutorial Grade A | Tutorial Grade B | Tutorial Grade C | Tutorial Grade D | Tutorial Grade F
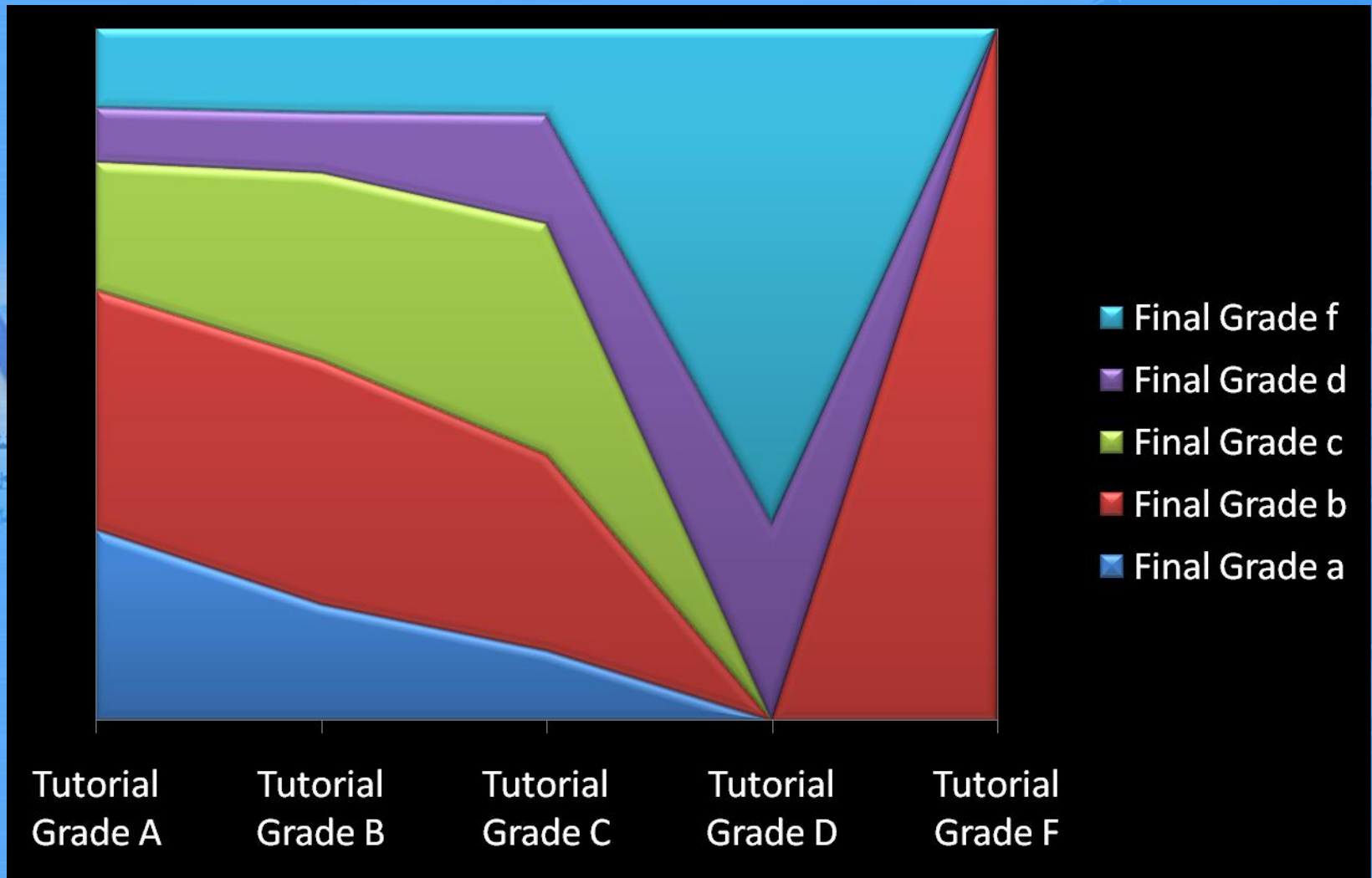
Tutorial Grades vs. Final ENL 111 Grades
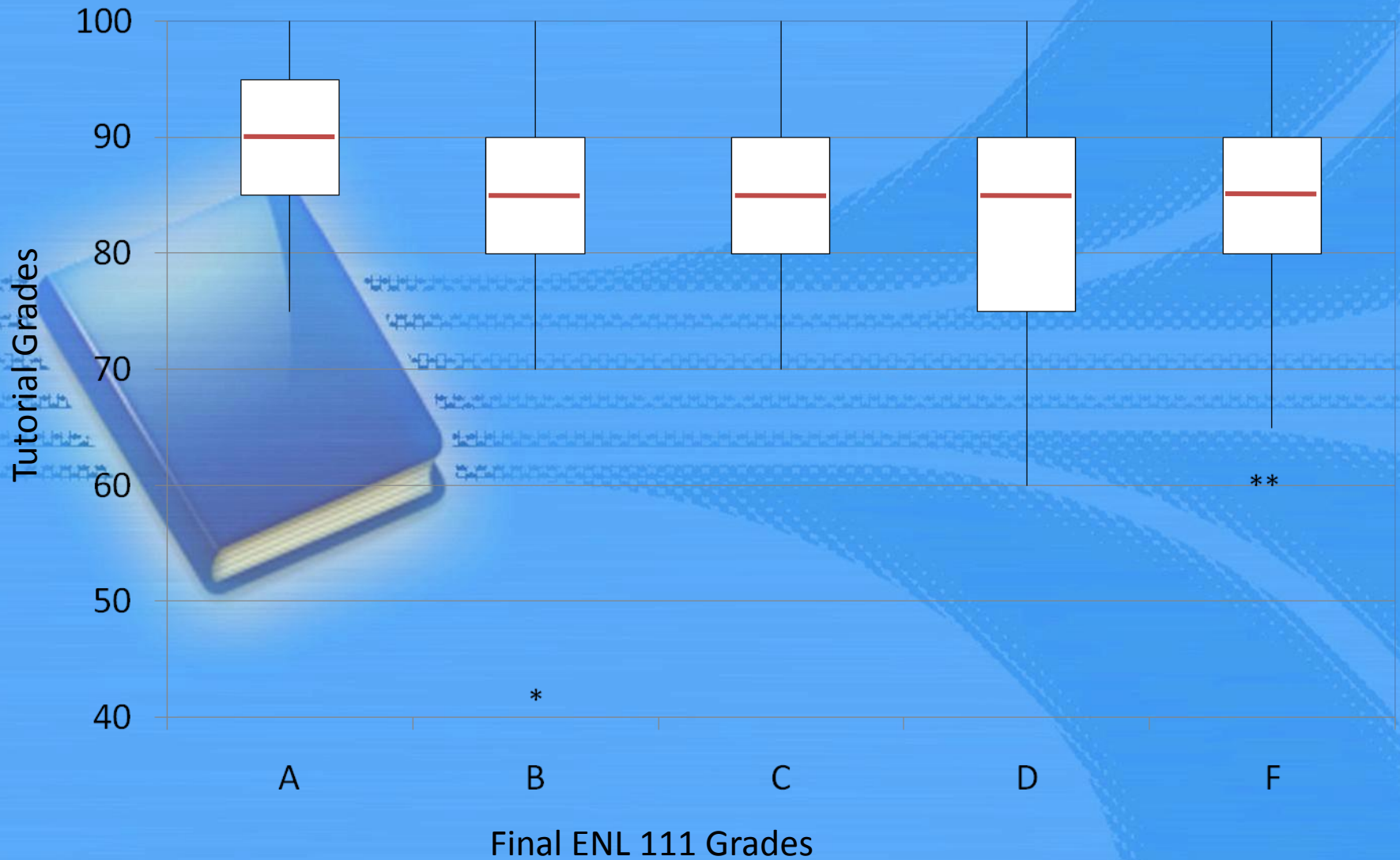
Final ENL 111 Grades vs. Tutorial Grades
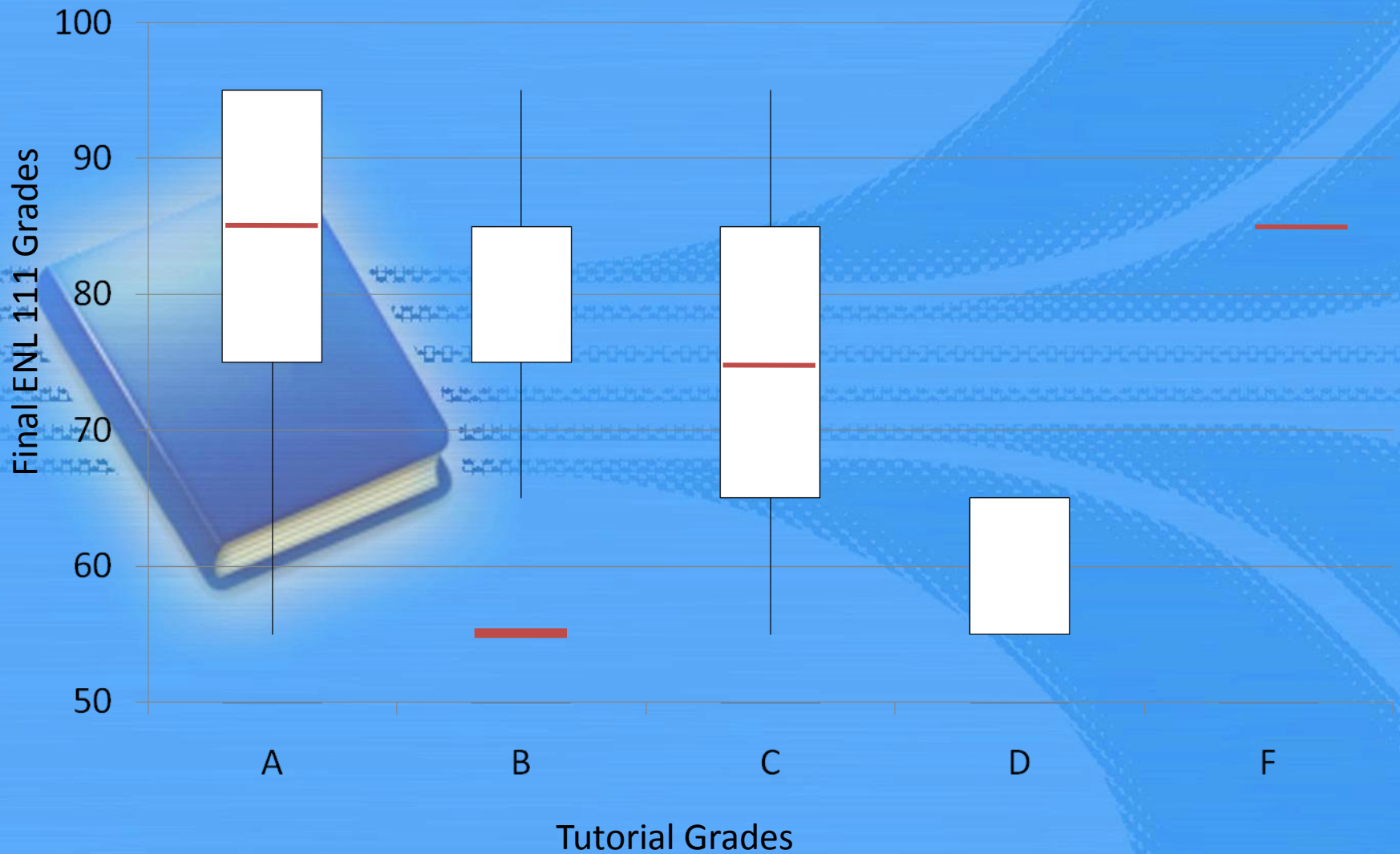
Any Correlation of Tutorial Quiz Grade and the Student's Final Grade?

- This data did not measure a <u>cause and effect</u> relationship. However, it did confirm that a positive relationship exists.

- The probability of a Type 1 error was very small due in part to a very large sample size.

- Data for students falling in either of the following categories was not entered:
  - Zero grades on the tutorial
  - Grades for students who dropped or withdrew from ENL111

Look At This Data
(This describes a relationship not a cause.)

Student's Grades on the Tutorial:

Student's Final Grade in the Course:

- 78% → A, B, C

- A, B, C

- 55% → A
- A

- 46% → B
- B

- 21% → C
- C

- 56% of those who did not take the tutorial at all…
- D or F
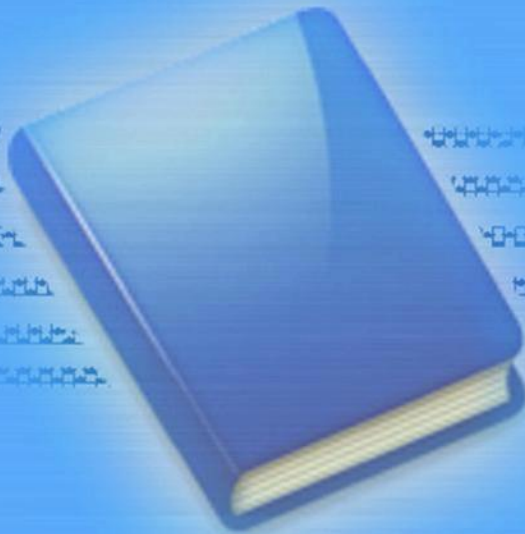
Outcomes:
Was This Tutorial Practical?

- Concepts were uniformly presented
- Students had to interact with the material
- Immediate feedback given per individual question
- Immediate visual information given
- Higher levels of research skills were taught

Outcomes: The Tutorial Addressed Students Learning Preferences

- Graphics-based visuals

- Text-based visuals

- Auditory modes

- Tactile or kinesthetic methods used

Outcomes

Outcomes

LIBRARY ASSIGNMENT for Students in ENL111
Spring 2006

ENL111 section: 03   ENL111 faculty member: Bunting, K

Librarian's name: Librarian

Student's name: John P Doe

Complete these sections of the assignment by:
Part One: _____
Part Two: _____
Part Three: _____
Part Four: _____

After finishing all four parts, hand in the completed assignment at the Library's Reference Desk
by: _____ . The librarian will grade it.

Come to class that will be held in the Library, LRC 151, on: _____

The Library Assignment

Part One: Developing the research question and the list of words or short phrases

I.   Write your research question here:

II. Using the research question above, develop a list of 3 words, 3 keywords, or 3 very
short phrases here: Do not write a complete question or complete sentence below.

A._____

B._____

C._____

Part Two: Finding references to books by using a catalog

I.   Use the Library's home page found at http://www.pct.edu/library

II. Choose the link to the "Library Catalog" located on the left side of the screen in the blue column.

III. Before typing your search strategy, choose "Power Search".

IV. Use "AND" to connect at least two of the three words, related words, or very short phrases from "Part One: Section II: A, B, or C" above. If you don't get any results, use only one word, or one very short phrase, and search.

V.   From the list of results, choose one book and click on "Details". The "Item Information" about that book will appear. Check to be sure that the book you choose is really on your topic. (If the book is checked out, choose another on your list. Repeat this until you find a book. Need help? Go to the Reference Desk.)

VI. Print the first page of the "Item Information."
On the menu bar, click "File," the "Print." In the "Page Range" section, choose "Pages:"; enter 1 in the box, and click "OK". (This will save you few pages on your printing quota.)

*VII. Staple the "Item Information" to this assignment sheet.

VIII. Using the "Item Information" page that you printed, find the book on the shelf in our library. Bring the book to the Reference Desk of the Library where the reference staff will stamp the "Item Information" page as being approved. (Part Two is finished.)

Part Three: Finding references to articles by using a database of articles

I.   Use the Library's home page found at http://www.pct.edu/library

II. Choose the link to the "Databases" page.

III. Choose the database "ProQuest-(general)".

IV. Choose "Advanced Search".

V.   Use "AND" to connect at least two of the three words, related words, or very short phrases from "Part One: Section II: A, B, or C" above. Use at least two search boxes.

VI. **Print the first page of the list of articles retrieved**, not the first page of the first article opened.
On the menu bar, click "File", then "Print". In the "Page Range" section, choose "Pages:", enter 1 in the box, and click "OK". (This will save you a few pages on your printing quota.) Do not print the article! Need help? Go to the Reference Desk.

*VII. **Staple** that page to this assignment sheet. (Part Three is finished.)

Part Four: Finding information by using a search engine

I.   Use the search engine Google found at http://www.google.com.

II. Choose "Advanced Search".

III. Use "AND" to connect at least two choices from "Part One: Section II: A, B, or C" above. Remember that when using Google, the word "AND" is not shown.
Type one word, one related word, or one very short phrase in one search box.
Type another word, related word, or very short phrase in the second search box.
Choose the English language.

Does your research require information from only the past year? Any time?
Do you want to retrieve web pages from a .gov domain?

IV. **Print the first page of the list of web sites retrieved**, not the first page of the first website opened.
On the menu bar, click "File", then "Print". In the "Page Range" section, choose "Pages:", enter 1 in the box, and click "OK". (This will save you a few pages on your printing quota.) Do not print the information from any of the web sites! Need help? Go to the Reference Desk.

*V. **Staple** that page to this assignment sheet. (Part Four is finished.)

The Library Assignment is finished!
Hand in the finished assignment at the Library's Reference Desk!

Outcomes
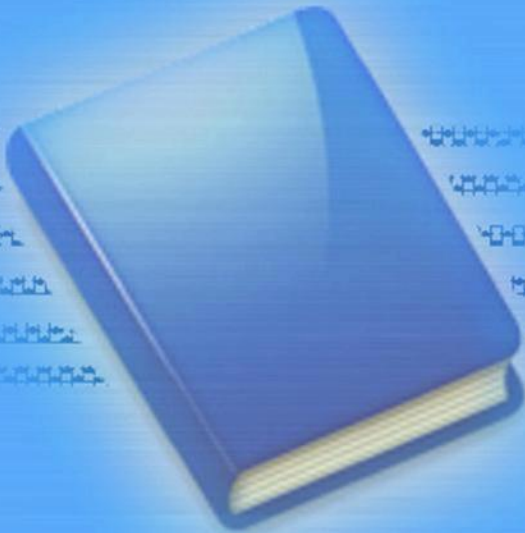
- Library Assignment graded by librarian

- Easy to convert to a new LMS platform

- Decreases the learning curve in having to make repeated changes transitioning from one platform to another
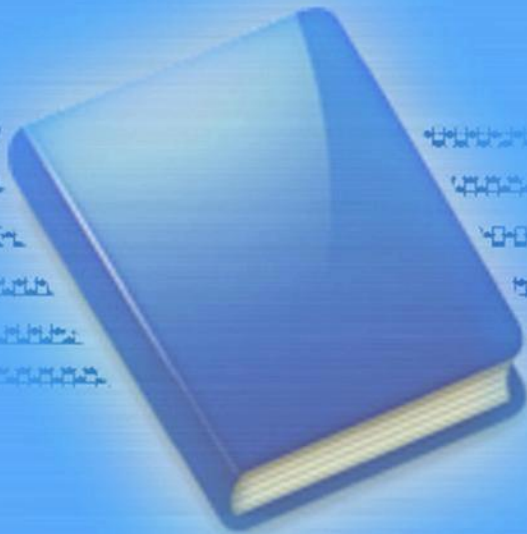
The most unexpected feature:

- Students seemed to embrace this learning method!
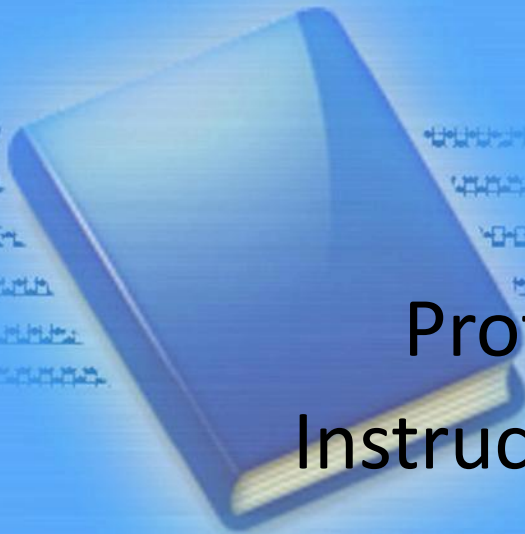
The Future

Survey students

- Did they use this material throughout their college career?

- Did they use this material after they graduated?

- Ask the students for comments about what other material should be included

Questions? Comments?

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