

Flipped Classroom: Disaster or Coup de Gras

Hull College of Business

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PRESENTER

Buffie Schmidt, MBA, Ed.S.

- Education:
 - B.S. in Computer Science and Mathematics, with Minor in Chemistry from Brenau University in Gainesville, GA
 - MBA & Ed.S. in Ed. Leadership from Augusta State University
- Career:
 - Georgia Regents University
 - Troy University
 - Walt Disney World Co.
 - Electrolux
 - CompUSA

spots.gru.edu/bschmidt

What's Next?



"As we start a new school year, Mr. Smith, I just want you to know that I'm an Abstract-Sequential learner and trust that you'll conduct yourself accordingly!"

<http://serc.carleton.edu>

A stylized signature of the cartoonist, appearing to be 'Browning'.

Teaching Philosophy

- Employers hire for skills – not degrees:
 - Problem solving, critical thinking, decision making, communication, collaboration, time management
- Education = Power
- Perception = Reality
- Win Battles and Victory will follow
- In business (life) the audience is key
 - Know your students

- I Strive to engage students, Foster Deep thought and Critical Inquiry
- Require students take some responsibility for learning
 - Accept nothing late
 - My job is not to teach, it is to help the student learn
- Utilize varying forms of teaching/evaluation methods

Teaching Philosophy

- **Differentiated Teaching**

- Provides multiple ways for processing concepts, demonstrating knowledge, and evaluating assessments
- Goal: Maximize growth of individual students
- Goal: Meet student where they are

- **Authentic assessment**

- Engage in real life scenario
- Reinforce knowledge and skills learned in classroom
 - Simple as leprechaun comic task or as involved as graph creation from newspaper
- Performance based learning and assessment

Getting Started Exercise

Boring Basics

- Select one concept/chapter with which you know your students struggle for which you are willing to try something new
- Organize into groups of 2 or 3
- Complete the Boring Basics handout
 - Left side: Fill in individually based on a current issue
 - Share your struggle/current solution with someone
 - New Idea: Receive at least one idea from someone
 - Right side: Take notes on someone else's struggle and the solution you offered to them

Name: _____

Discipline: _____

Course: _____

Problematic Concept/Chapter: _____

BORING BASICS

SHARED IDEA

(You share)

Struggle:

Your Current Solution:

New Idea/Solution:

IDEA RECEIVED

(Someone shares an idea with you)

Struggle:

Suggested Solution:

New Contact Info:

Name: _____

Email: _____

Flipping Defined

CASE CLASS

- An Old Idea with a New Name and a Twist

Backwards Classroom

Inverted Instruction

Inverted Classroom

Blended learning technique

Reverse Teaching

Peer Instruction

Reverse Instruction

Flipping Defined

- So What's the **New Twist**
 - Focus on Higher Level Thought (deeper learning)
 - Maximize Time with Instructor
 - Increased one-on-one opportunities (Bloom 1984)
- No need to flip the entire course right away
 - Flipping one assignment will change the world for someone

*.....Dates back to start of printing press

Flipping Defined

- **Flipping:** Students complete initial learning on their own time and class time is used to work through problems, apply concepts to scenarios, collaborate with instructor or peers, and ultimately achieve deeper level understanding from interactive and engaging activities resulting in higher level thought
- **Backward Course Design: Develop or Redesign**
 1. What do they need to know?
 2. Determine best way for them to learn (that is also fun for instructor)
 3. Develop a way to evaluate their learning
 4. Write the syllabus

Flipping Defined

○ Flipping as a part of this Process

- Brings semi-knowledgeable students to you on day 1
- Allows a fun and engaging learning experience
- Increases job satisfaction:
 - You design learning experiences that you enjoy
- Provides more time:
 - Teach a Wider Breadth or Deeper Depth of concept knowledge
- Offers opportunity for students to be:
 - Amazed at facts and Proud of themselves
- Forces students to take responsibility for their education
 - Time management, communication, preparation, concepts
 - Announce specific expectations and build in allowances, free time!

Flipping Defined

○ The Basics of Flipping

- Before Class - Student reviews/learns concepts
 - Instructor spends less time lecturing and more time with students (Often achieved via technology-video lectures)
- Classroom time - Apply concepts to other contexts
 - Differentiation made easier
 - Higher level thought ([Blooms Taxonomy](#))
 - Collaborative, Student Centered, Experimental Learning
- After Class – Student engages in reinforcement activity
 - Retention is achieved/improved
- *Findings – Close the loop
 - Assess the flipped assignment

Flipping Defined

Traditional

- Class Lecture
 - Homework/Quiz
- Class Lecture
 - Homework/Quiz
- Exam

Teach by Telling

Teacher = Talker

Student = Bored

Learning = Teacher

Class = Teacher focused & Knowledge/Understanding levels

Flipped

- HW: Video Lecture
- Class discussion
 - HW: Reading activity
- Class small groups
- Exam

Teach by Questioning

Teacher = Tutor

Student = Engaged

Learning = Student

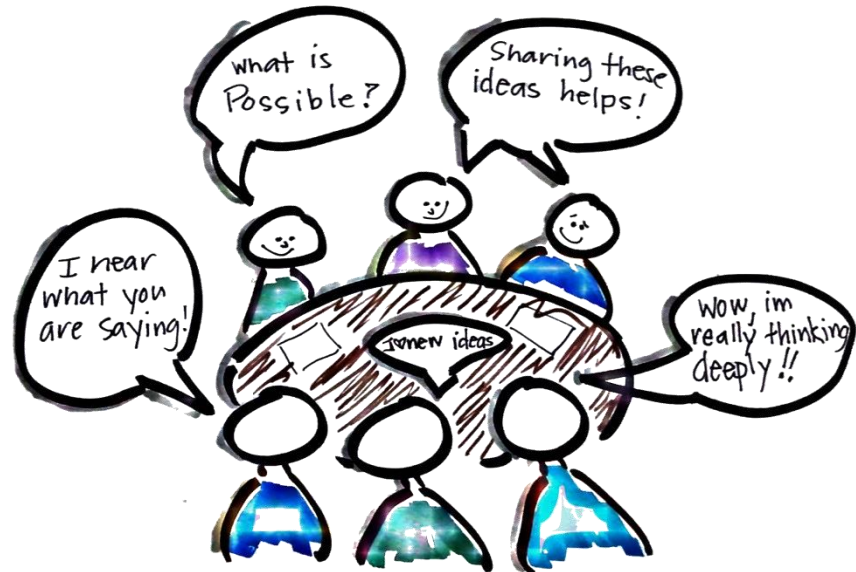
Class = student focused & Application/Analysis levels

Flipping Defined

- How are you using your class time?



Everyone knows learning must be serious and difficult and you must remain seated at all times. No fun allowed.



Flipping Defined



- How are you using your class time?

Higher level thought

Creativity

APPLICATION

Deeper Thinking

Exciting

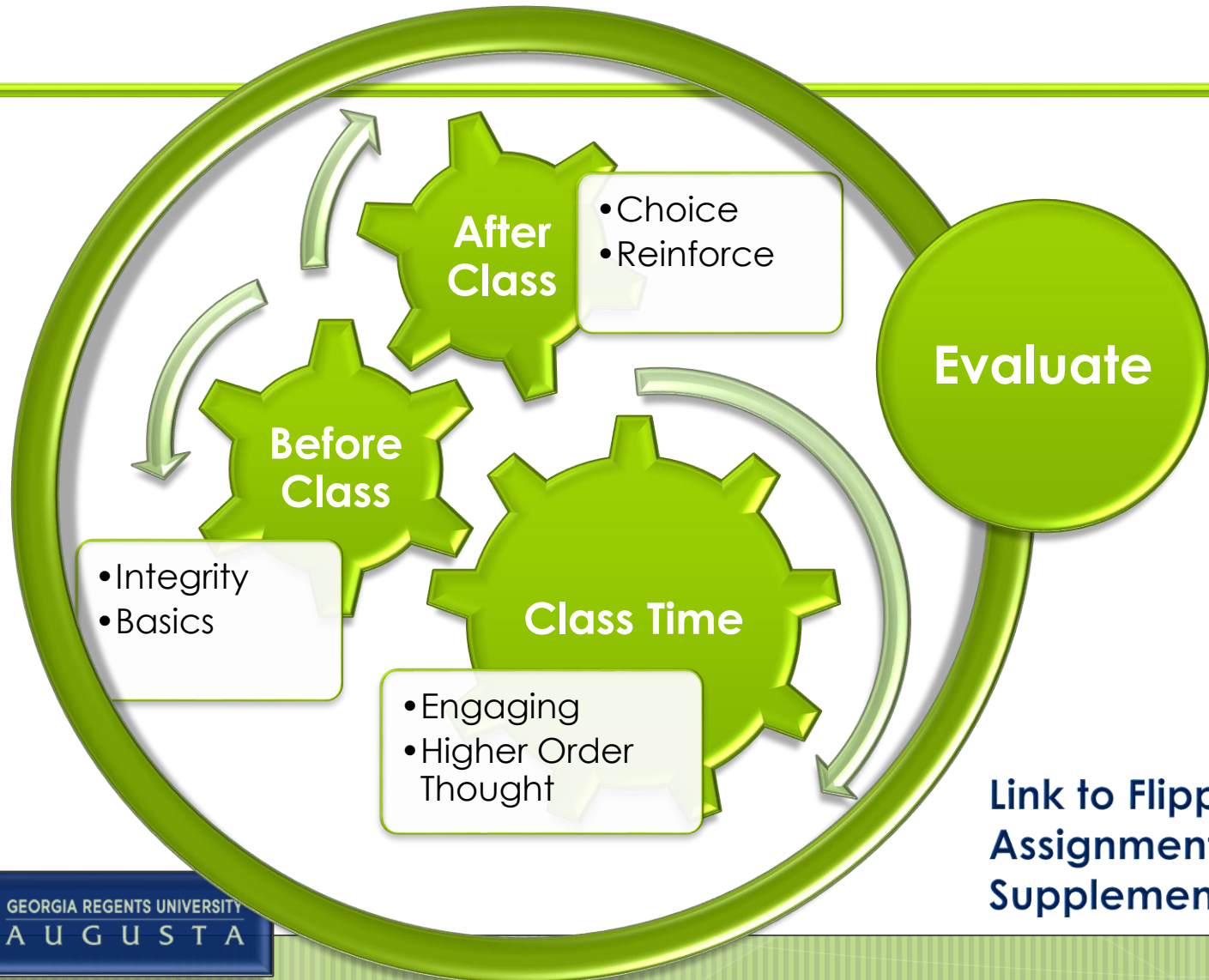
Analysis

Critical Thinking

Improved retention

Solution based discussion

Flipped by Schmidt Process



Process Examples Defined

Step 1: Require assignment on *concepts being covered in class* to be completed **prior to class**

- Voiceover on PowerPoint
- Video lecture (Khan Academy, iTunes University, personal lecture capture, educational YouTube)
- News clip (selected or unsolicited)
- Homework based on concept/chapter
- Group assignment with specific deliverables
- Others?

*Also assists with time management skills
**Forces student to own learning

Process Examples Defined

Step 2: Integrity of Flipping Assignment:

Ensure students ethically complete the pre-activity

1. Short quiz at the beginning of class
 - o Built into grade or for extra credit
2. Begin class with discussion assuming Blooms Level 1 & 2 knowledge levels
 - o Dismiss class if the majority are unprepared and do not re-cover in the next class period
3. Begin class with short group exercise requiring application
 - o Take up the papers with names

Process Examples Defined

Step 3: Thought Provoking, Goal Assignments used to stimulate deeper thought, improve critical thinking, and encourage creative, application, and analytical thought resulting in excitement and concept retention

1. Current Event Class Discussion
 - o Encourage and Reward participation
2. Small Group Discussions
3. Clicker Questions
4. Working End of Chapter Problems (math)
5. Solving Project Based Learning Assignments

Peer-to-Peer Learning

*Goal assignment: What have you always wished you had time to do in class?

Process Examples Defined

Step 3: Thought Provoking, Goal Assignments used to stimulate deeper thought, improve critical thinking, and encourage creative, application, and analytical thought resulting in excitement and concept retention

6. Real-Life Document Analysis (hand on, labs)
7. Problem Solve/Clarify
8. Individual Reflection
9. Course Projects:
 - Debates
 - Presentations

**In-depth
Application**

Case Studies

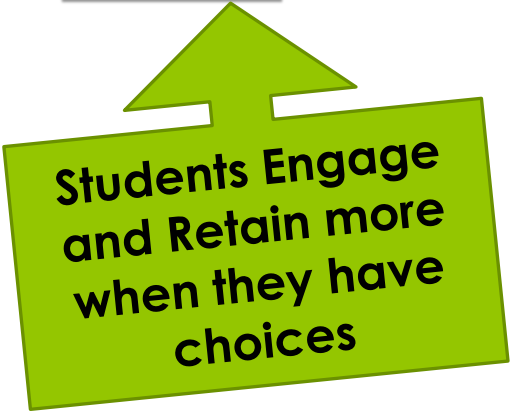
Process Examples Defined

Step 4: Follow up Assignment in an attempt to solidify the imprint of the newly gained knowledge on the student's mind.

- Additional Experience –

After class assignment of choice

- Write in journal
- Interview professional
- Mind map the concepts
- Review of Key concepts
- Fishbone diagram



**Students Engage
and Retain more
when they have
choices**

*Consider requiring a minimum number to be completed over the semester in a portfolio

Process Examples Defined

Step 5: Results Assessment

- Compare – was your “flip” effective
 1. Exam Scores
 2. Embedded Questions assessing specific Learning Outcomes
 3. Overall Course Grades
 4. Course Evaluations
 5. ETS scores



*Do NOT STOP at assessing your Goal!
-Look for other benefits to students/faculty or areas for improvements to the design?

My Design

BEFORE- Boring Basic, traditional delivery/assignments

1. Attend lecture of chapter
 2. Complete homework/quiz
- Repeat 1 & 2 for three or four chapters
3. Complete Exam
- Repeat 1-3 for three or four exams
4. Complete Final Exam

*Boring (for the student)

*Resulted in high DWF rate

My Design

AFTER- Flipped Classroom

1. Read Chapter & Complete Homework
2. Attend Class & participate in daily activity
 - Repeat 1 & 2 for three or four chapters
3. Complete Exam
 - Repeat 1-3 for three or four exams
4. Complete Project Based Learning course project

*We must change our approach to evaluation if we really desire to change our approach to teaching – students study according to assessment practices!

My Design - Data

Boring Basic verse Flipped Classroom

- 37-45 students
- Mostly Sophomores
- Some Juniors
- Few Freshmen/Seniors
- 50% Business Majors
- 30% Political Science
- No significant differences amongst the cohorts
- Evening classes were smaller with more upperclassmen and non-traditional students

My Design - Data

Boring Basic verse Flipped Classroom

Assignment	Spring 11	Spring 12	Spring 11	Spring 12	Fall 11	Fall 12
Homework	Same Spring Semesters 2011 & 2012				Fall Semester: Improved Flip Assignment	
Mind Maps						
Graphs	Spring Semester: Day classes		Spring Semester: Evening classes			
Quizzes						
Exams						
Debate						
Journal						
Participation						
Total						

Findings

My Design - Data

Greater % assigned to Flipped & Performance Assessment!
*70% from Higher Order thought assessments

Boring Basic verse Flipped Classroom

Assignment	DAY Class		EVENING Class	
	Spring 11	Spring 12	Spring 11	Spring 12
Homework	0	0	0	0
Mind Maps	0	10	0	10
Graphs	21	15	21	15
Quizzes	13	0	13	0
Exams	44	50	44	50
Debate	0	15	0	15
Journal	12	0	12	0
Participation	10	10	10	10
Total	100	100	100	100

*All numbers are percent values


Sources of Flips

Exams and Debates > 50% of course grade

Graphs are used to prepare student for exams and debate (formative assessment)

Student Outcomes

Boring Basic verse Flipped Classroom

	Macro		Macro	
	Afternoon		Evening	
	SPRING 11	SPRING 12	SPRING 11	SPRING 12
	Traditional	Flipped	Traditional	Flipped
#Students	45	45	19	43
A	29%	31%	37%	48%
B	36%	49%	16%	25%
C	13%	11%	16%	16%
D	4%	0%	5%	0%
F	9%	4%	16%	7%
W	9%	4%	11%	5%
	Completion Percentage		Completion Percentage	
A, B, or C	78%	91%	68%	89%
DFW	22%	9%	32%	11%
% change		13%		20%

Take Away

- **Things I Discovered**

- **This really works!**

- More students successfully completed course

- **Integrity** of Flipping Assignment is important!

- Must not be a “cake” assignment

- Organization and Consistency is important! (See time commitment.)

- Traditional and Non-Traditional students will benefit differently

- **I was able to:**

- Add more current events and ‘dream topics’ to classroom experience

- Achieve higher order level of thought in class discussions and witness ‘light bulb’ moments as critical thinking took a foot hold

- Course debates were so engaging a graduate faculty member duplicated and continues to use in her MBA course.

Take Away

○ **Time Commitment**

- Preparation of Flipped Assignments
 - Integrity, Concept based, Assessable
- Preparing students for 'flipped' experience
 - Explaining concept
 - Specific before/during/after class expectations
- Managing student expectations and the 'flipped experience'
 - Encouragement for slow to grasp students
 - Maintaining challenge for quick learners
 - Incorporating higher-level thought scenarios into curriculum

○ **Well worth the time based on**

- Final assessment
- Student comments (need to study these!)

Research Opportunities

- Further discover the differences among traditional verse non-traditional student benefit
- Explore possible differences in afternoon verse evening students
- Determine differences in course evaluation comments
- Determine retention level success by following up 6/12 months later
- Others?

**Publish a
Flipping Guide?**

Discipline Integration

- Chemistry
 - <http://www.chemisme.com/>
 - Videos for Lab Prep, instructions, examples of accurate outcome to decrease time needed for lab or increase rigor of lab assignment
 - More time in class for practice problems, discussion, group quizzes, mixed session assignments-students can self pace
 - <http://kulowiectech.blogspot.com/2011/01/flipping-history-classroom.html>
- History
 - Essay practice
 - Guest speakers
 - Field trip experiences: monument documentation, history research, museum visits
 - In class activities: Cave writing exercise, replicate archeological dig

Discipline Integration

- Political Science/Economics
 - Assure readiness - Baseline preparedness (math, basic terms)
 - Dive deeper - Campaign analysis/preparation: Require small groups to determine best path for campaign on various hot topics, have group recorder turn in paper at end of class with requested items.
 - PBL: Commodity from production to consumption
 - Small groups create economic graphs from newspapers
- Psychology
 - <https://www.youtube.com/watch?v=QTDQaaVWEzI>
 - Psychiatric intervention and cultural implications
 - Loci memory technique benefits those with depression

Discipline Integration

- Communication
 - Require (memo, resume, cover letter) be brought to class prior to class discussion on written communication chapter
 - Require 2 minute informational/persuasive speeches on topic of choice on day covering oral communication. (do not have to choose everyone, allow class to critique speakers, offer extra credit for volunteers)
- English
 - The local newspaper is an excellent source of inaccuracies
 - Utilize your library!
- Physical Education
 - Video of Rules, Sportsmanship, Team Selection

Discipline Integration

- Mathematics/Finance
 - Require analysis of firm of choice using specific equation or concept being covered (remember there is not a need to apply all of your knowledge to concept specific assignments)
- Nursing
 - <http://www.youtube.com/watch?v=UL0ADbzCR2U&list=PLJ5kKhvVxA5Ju4lv0ZBqVGiUx1-HSQqMJ>
- Sciences, Art, Music, Logistics, or any Discipline
 - Follow outline to follow.....

*Brainstorm with
Colleagues!*

Discipline Integration

○ Technology Resources

- Discussionthreads.com
- Prezzi
- Free graphic organizer software
- Anymeeting.com
- Edpuzzle.com (video)

○ “Old School” Resources

- Library
- Personal touches (interviews, surveys)
- Text/book summary
- Lab report

*Incorporate
Technology
– or NOT!*

Schmidt says... Design Your Flip!

How to Flip Your Course – Flipped by Schmidt

o Design the deliverable considering

1. Where is your concept used in real life?
2. What assignment will benefit students beyond specific concept understanding?
3. Evaluation of group or individual assessment (rubric?)

o **Don't focus on the concept you need them to learn!**

o **Do focus on how the concept will be utilized/applied in their life.**

- o Know your students. Personalities, goals, majors, year in school, learning styles

o **Whenever possible:**

- o Allow students to choose
- o Partner with local businesses

Schmidt says...

Design Your Flip! (Exit Exercise)

Flipped by Schmidt

- Complete the Flipped by Schmidt handout
 - Share your outcomes/ideas with each other
- * Problem Concept/Chapter: Select one concept/chapter with which you know your students struggle for which you are willing to try something new (Gains from Trade)
- !! - Specific Concept Struggle: Be specific concerning the struggle your students experience on this concept (math)
- **1** - Big Picture: Where is this concept utilized in real life? What career path utilizes this concept?
- **2** - Real World: What assignment relates to or requires student to enter the real world. Think cross-discipline/multidimensional
- **3** - Evaluation: Be sure to consider the level of difficulty with rubrics, formative/summative or objective/subjective assessment

Handout Instructions

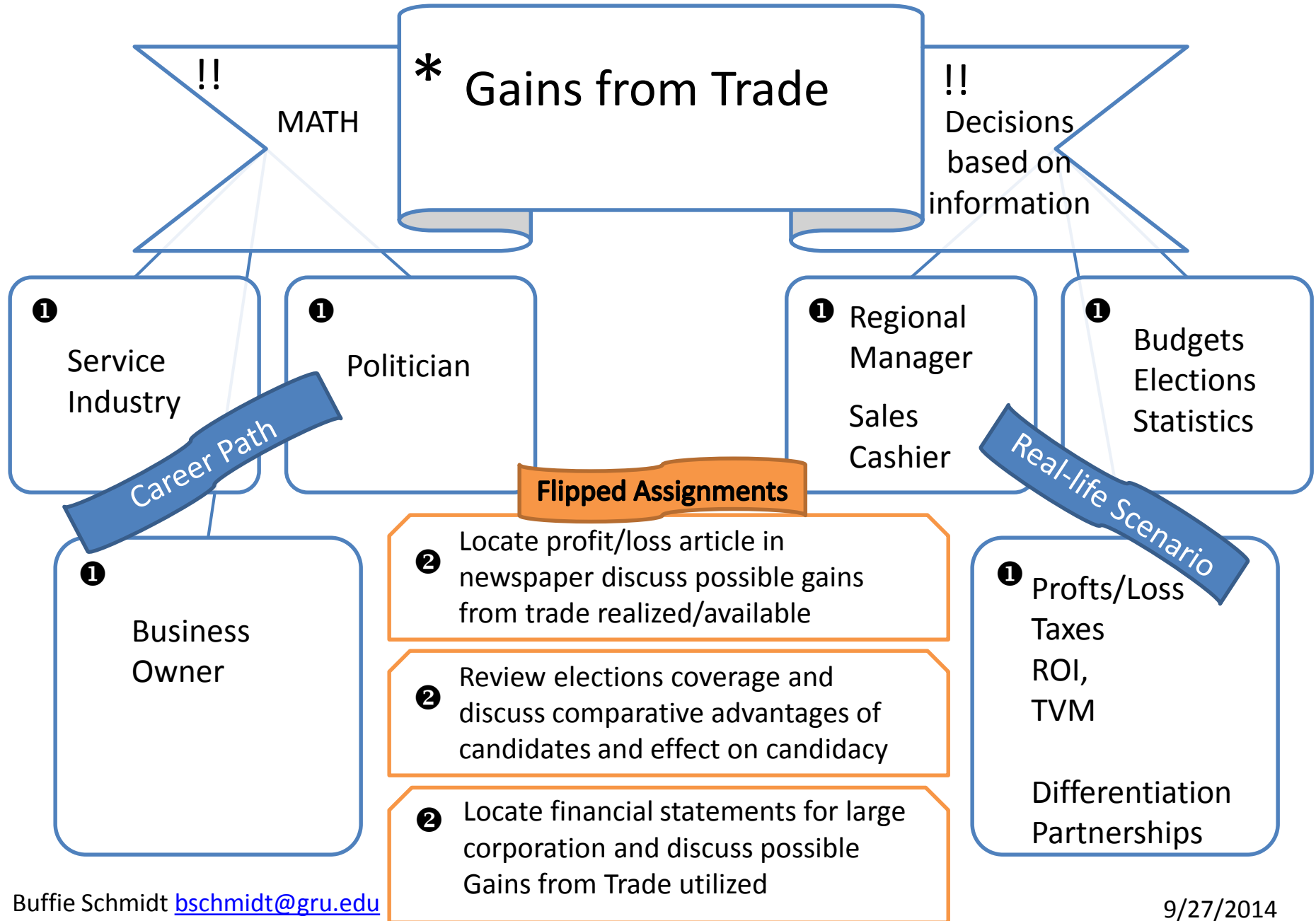
This worksheet is for **YOUR** benefit. It will help you devise effective Flipping ideas. It is not for students.

Orange boxes are assignment ideas you will choose from to utilize in class or as flipped assignments.

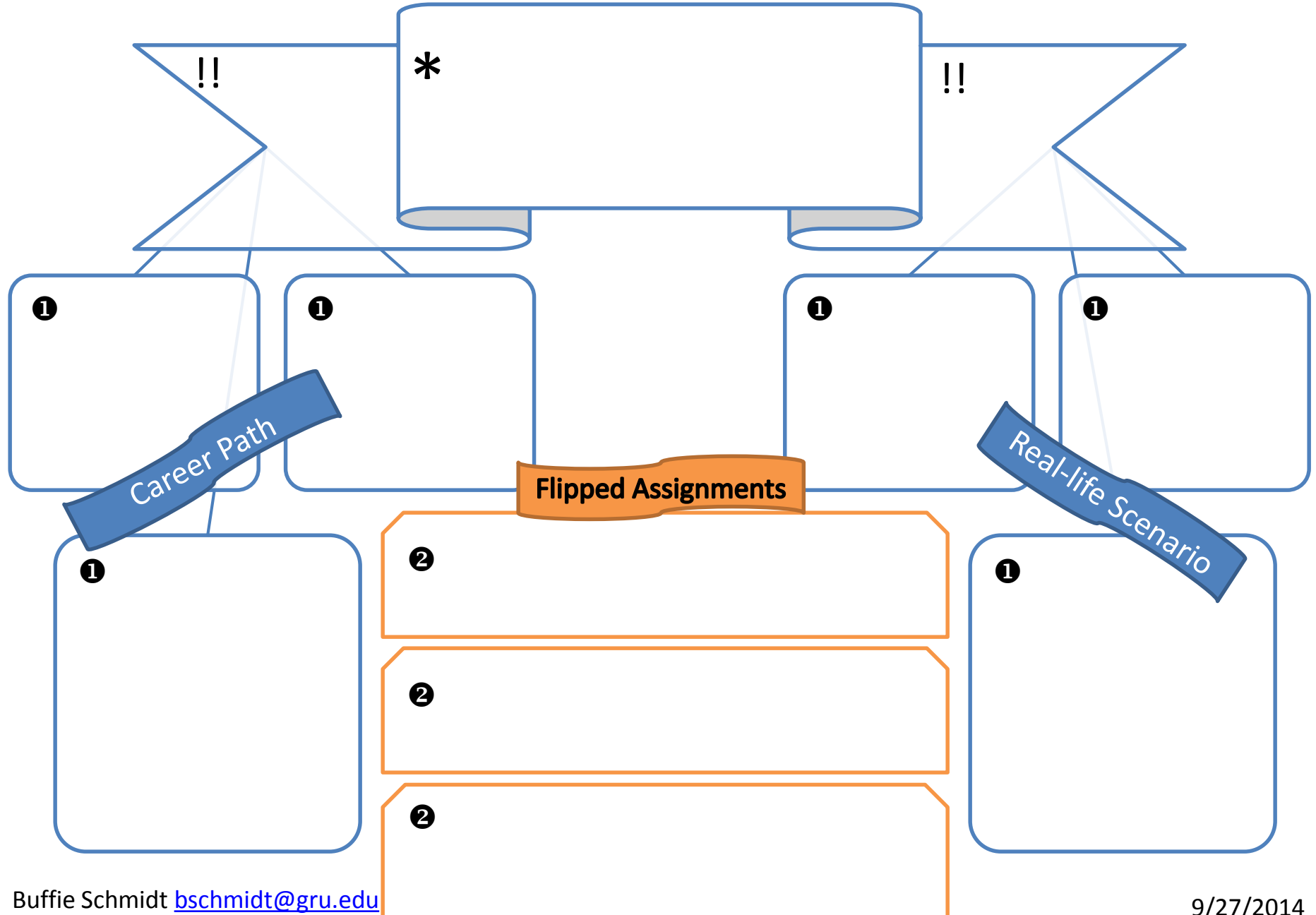
Blue Boxes indicate a recommended process to derive excellent ideas for flipped assignments that address root concepts/issues by utilizing real-life and proven retention increasing strategies

- *** Problem Concept/Chapter:** Select one concept/chapter with which you know your students struggle for which you are willing to try something new [Gains from Trade]
- **!! - Specific Concept Struggle:** Be specific concerning the struggle your students experience on this concept. What about this particular concept is difficult? (This step may require research, surveying students, or an objective view of the material) [math]
- **1 - Big Picture:** Where is this concept utilized in real life? What career path utilizes this concept? [Politician: campaign budgets, election stats; Business Owner: Profit/Loss, ROI, Taxes, Partnership decisions]
- **2 - Real World Application:** What assignment relates to or requires student to enter the real world. Think cross-discipline/multidimensional. (This step requires Brainstorming and Creative Thinking- You are determining possible assignments to use for the flip. i.e. Class Time) [View election news coverage, campaign adds and Discuss comparative advantages of candidates; Analysis of real financial statements]
- **3 – Implementation/Evaluation:** It is now time to create your assignments and Flip your course/lecture. (Be sure to consider time for completion and level of difficulty with rubrics, formative/summative or objective/subjective assessment)
- Share your outcomes and ideas with others / Document your findings

FLIPPED BY SCHMIDT



FLIPPED BY SCHMIDT



Exit Exercise Summary

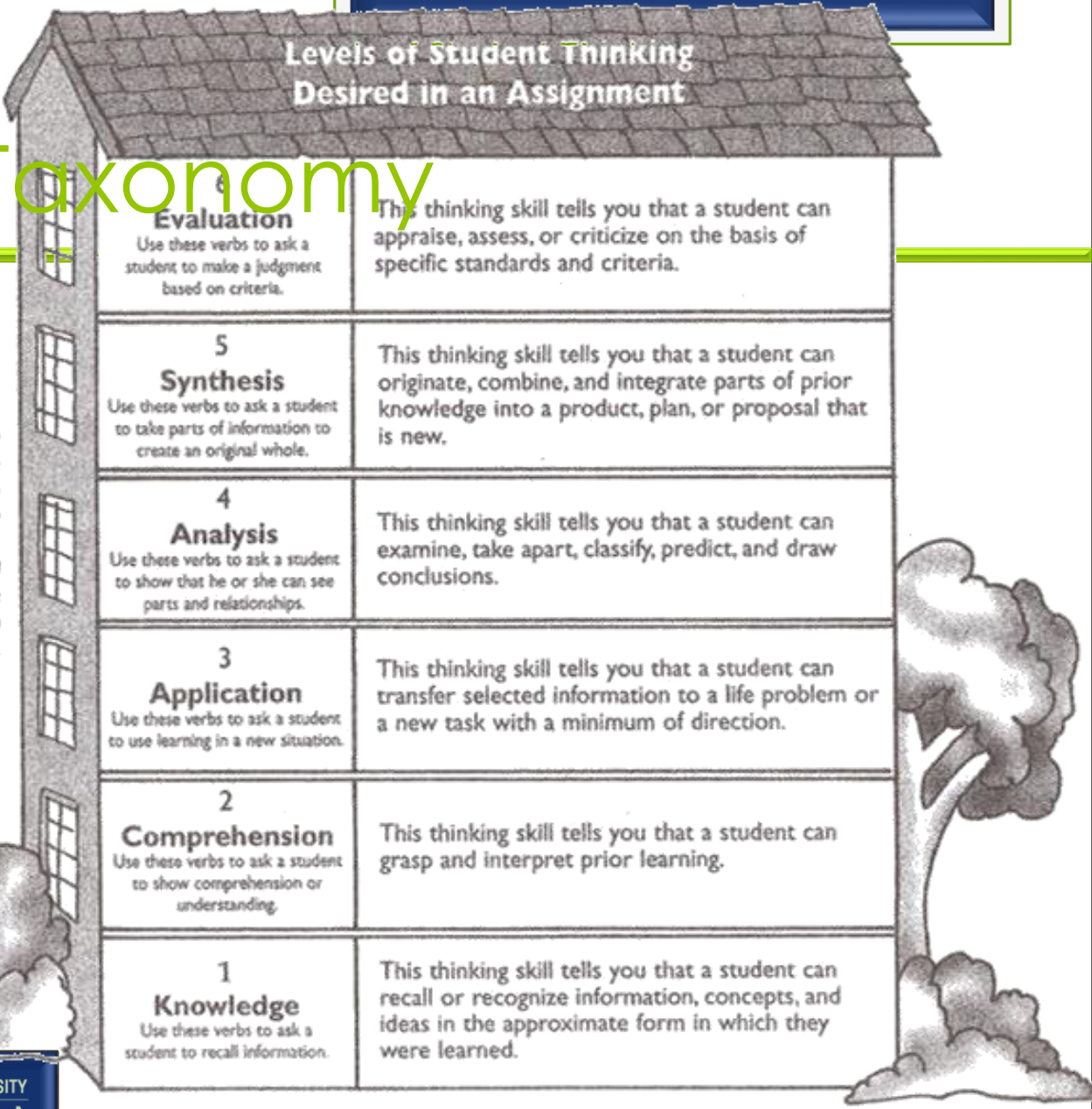
Your Findings?

- Compare Handouts
 - Which one do you think will excite and engage your students the most?
 - Which one do you think will result in higher level thought, greater retention, improved critical thinking, and decision making skills?
 - Which one are you more excited about?
 - If you are not more excited about the Flipping process, Why?
 - How can you make it more concise?
 - How can you adapt the concept to your teaching style?

Blooms Taxonomy

Levels of Student Thinking Desired in an Assignment

The level of thinking you want from a student in an assignment is based on the level from which you select the verb you use. The type of thinking required at each level becomes more complex as you go from knowledge to evaluation.



Return to #12
Flipping Defined

Return to #17
Step 2: Integrity

Blooms Taxonomy

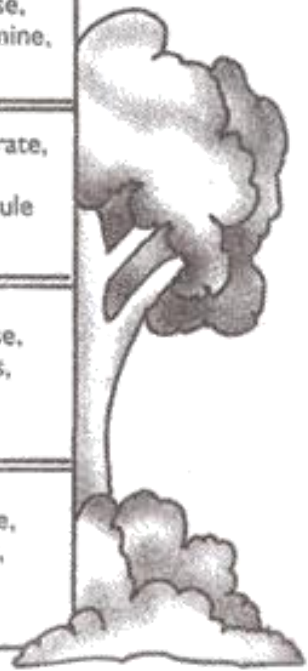


6 Evaluation	appraise, choose, compare, conclude, decide, defend, evaluate, give your opinion, judge, justify, prioritize, rank, rate, select, support, value
5 Synthesis	change, combine, compose, construct, create, design, find an unusual way, formulate, generate, invent, originate, plan, predict, pretend, produce, rearrange, reconstruct, reorganize, revise, suggest, suppose, visualize, write
4 Analysis	analyze, categorize, classify, compare, contrast, debate, deduct, determine the factors, diagnose, diagram, differentiate, dissect, distinguish, examine, infer, specify
3 Application	apply, compute, conclude, construct, demonstrate, determine, draw, find out, give an example, illustrate, make, operate, show, solve, state a rule or principle, use
2 Comprehension	convert, describe, explain, interpret, paraphrase, put in order, restate, retell in your own words, rewrite, summarize, trace, translate
1 Knowledge	define, fill in the blank, identify, label, list, locate, match, memorize, name, recall, spell, state, tell, underline

Bloom divided the verbs into six categories. All the verbs in a group indicate a kind of thinking skill needed to complete an assignment. The verbs denote what a student is to do.

Return to #12
Flipping Defined

Return to #17
Step 2: Integrity



Active Learning

People generally remember...
(learning activities)

People are able to...
(learning outcomes)

10% of what they read

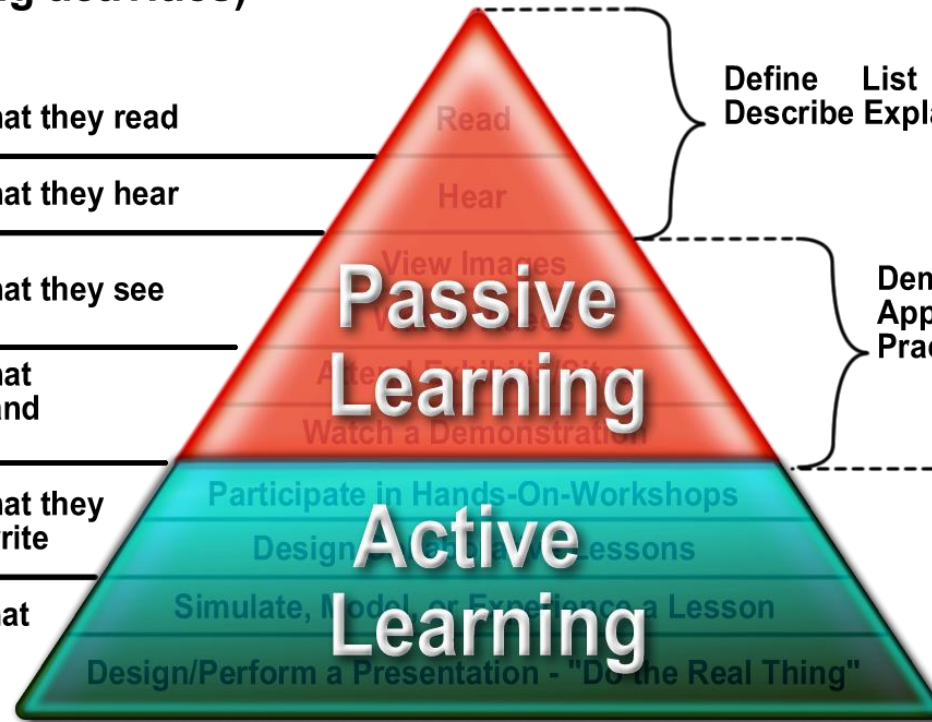
20% of what they hear

30% of what they see

50% of what they see and hear

70% of what they say and write

90% of what they do.



Define List
Describe Explain

Demonstrate
Apply
Practice

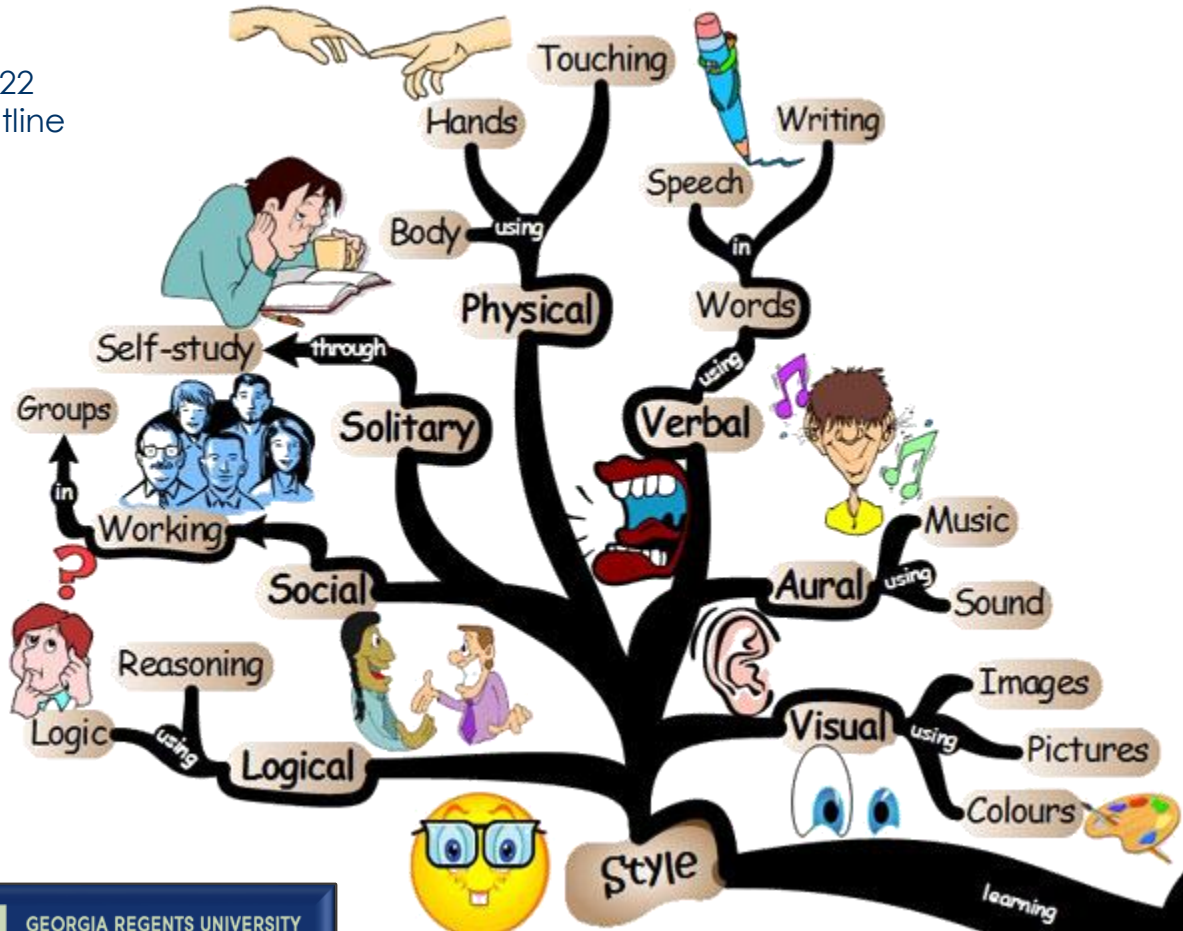
Analyze
Define
Create
Evaluate

Return to #19
Step 3: Thought

*wordpress.com

Learning Styles

Return to #22
Flipping Outline



*ccsf.edu

Flipped Assignment Examples



BEFORE CLASS

- Read Chapter
- Watch Video (lecture, news, etc)
- Preview PowerPoint (static, voiced or interactive)
- Online lab Homework
- End of Chapter Question(s)
- Group Assignment with specific Deliverables
- **GOAL:** Review/Learn Basic Concepts



CLASS TIME

- Class Discussion
- Small Group Discussion
- Small Group Assignment
- Clicker Questions
- End-of-chapter Problems
- Project Based Learning Assignment
- Real-Life Document Analysis
- Advanced Lab
- Case Studies
- Game
- Individual Reflection
- **GOAL:** Higher Order Thought / Retention



AFTER CLASS

- Journal Entry
- Interview Professional
- Mind Map Concepts
- End-of-chapter Problem
- Additional Lab
- PowerPoint Presentation
- Informational Video
- Develop Test Questions
- Fishbone Diagram
- **GOAL:** Review Key Concepts

Definitions

- Constructivist Teaching Style
 - Fosters critical thinking, develops independence
 - Learning builds on knowledge already possessed
 - Students retain more when actively engaged
 - Field trips, experiments, research presentations,
- Active Learning
 - A student must be involved in the learning process
 - Requires student to engage in higher order thoughts
 - Class discussions, learning group, debate, game, video reaction, study buddies (learning cells), etc.
- Project Based Learning
 - Requires students to investigate
 - Associates theory with real-life situations
- Authentic Assessment
 - Student perform or simulate the skill learned
 - Rubric evaluates “What should the student be able to do?”

Notes
