

But We Already Learned This Last Year...

Challenge: In an effort to save her pre-algebra students from complete boredom, Ms. Gee decides to try something different to teach/review basic math concepts that include measuring, area formulas and estimating. The students will be teaching the lessons.

Cooperative Learning Theory:

- Students are divided into groups of three.
- Each group will focus on one section from the chapter and present the information in that section to the class.
- Rubrics created by a joint effort between the teacher and students are passed out to remind the groups of the lesson criteria.
- Groups will research and prepare their lessons using any teacher-approved method of teaching to present their information to the class.
- The teacher, students, and group members will evaluate each lesson.
- Assessment will be administered by the teacher at the end of the chapter based on sample questions provided by each group.
- The teacher and students will reflect upon the lesson as a whole and offer suggestions for improvements.

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Problem-Based Inquiry: Students are asked to propose designs for the new school to be built in a new area. Students will review measuring, area issues, and budget estimating.

Problem-Based Learning: Students are asked to resolve a problem between neighbors arguing over a property line. Students will review map reading, measurement, area formulas and estimation.

Anchored Instruction: Ms. Gee decided to use a section from the Jasper Woodbury Series about measuring, area formulas and estimating.

WebQuest: Ms. Gee creates a WebQuest titled Trading Spaces & math (based on the show Trading Spaces) that focuses on measurement, area formulas, estimating money.

Just leave. You're driving me crazy!

Challenge – A student was given permission to leave class and go to the Special Education office whenever he and the teacher felt he could not behave in class. The student would then intentionally act out in order to leave class. What is the best way to address this situation?

Application of the Behaviorism Theory:

- Positive reinforcement for staying the entire class and behaving, i.e. a good call home, thanking him for his presence
- Negative reinforcement, i.e. selecting a non-front row seat for the next class day to sit in
- Modeling, i.e. seating him between the best behaved students

Famous Mathematicians in History

Challenge: Ms. Gee would like her algebra students to learn about famous mathematicians and their contributions to the field of mathematics throughout history. Mr. Robertson, a media specialist at the school, recommended incorporating resource-based learning into the project.

Goals: Ms. Gee has determined that the goals for the project are for each student to learn about one famous mathematician in depth individually and then to also learn an overview of several other mathematicians from other student's work. **Artifacts:** Students will choose how to display their project from one of the following: a PowerPoint Presentation, a Publisher Brochure, a dramatic performance, or a poster-board display. **Planning:** Ms. Gee and Mr. Robertson worked together on thoroughly planning the unit and divided all tasks that needed to be complete prior to student involvement.

Resources: Mr. Robertson has secured numerous resources (books, videos, periodicals) about famous mathematicians for the students to conduct research. **Timeline:** Ms. Gee and Mr. Robertson mapped out the timeline for the three-week unit with realistic dates and flexibility, if needed. **Locations:** Mr. Robertson has secured the media center and computer lab for Ms. Gee's class. **Rubric:** Ms. Gee has developed a rubric to assess the student's artifacts. **Product Evaluation:** Using the rubric, Ms. Gee evaluates the student's artifacts. **Evaluation:** Ms. Gee, Mr. Robertson and the students all reflect on the positive and negative aspects of the experience.

Just break it. It all gets recycled anyway...

Challenge: At a computer recycling company, employees in the destruction department physically take apart computers so similar materials can be grouped. Employees work well when supervised, however when management leaves, many questions/concerns arise and employees claim that they are unsure of what they are doing. It's possible that the confusion is a result of lack of motivation to do work.

Application of Motivation Theory:

- As a group, set company (volume) goals. Then provide feedback.
- Get employees to take an interest in the company's success, i.e. stock
- Have workshops/seminars to overall improve self-efficacy
- As a group, develop Volitional Enhancement Plan
- Have employees self-evaluate amount of work accomplished per day/week/month
- Offer extrinsic motivation for meeting goals, i.e. raise, party, etc.

Just break it. It all gets recycled anyway...

Challenge: At a computer recycling company, employees in the destruction department physically take apart computers so similar materials can be grouped. Employees work well when supervised, however when management leaves, many questions/concerns arise and employees complain they are unsure of what they are doing.

Application of Vygotsky's Constructionism Theory:

- Introduce several MKOs for when management is not there, i.e., department head, experienced co-workers, electronic/paper-based job-aids. Then use MKOs to increase each employee's ZPD.
- Have a workshop where co-workers can help those having difficulties
 - If problem is based on a lack of motivation, alternative approach needed.

Instructional Design Roadblocks in the Business World

Challenge: Julia Trainer will be facilitating a workshop titled “Instructional Design Roadblocks in the Business World” next week. Her participants vary in age (25 – 62), education levels (BS, MA, PHD) and experiences (interns through head managers). She wants the workshop to be meaningful to everyone who attends and is not quite sure how to accomplish her goal.

Learning By Design: Julia has prepared a website and handouts to give each participant that outline the workshop expectations, instructional objectives, evaluation procedures and workshop topic related resources, including a plethora of examples to draw knowledge from and serve as a starting point in the group discussions. The examples are all taken from a wide variety of real businesses (however the names have been changed for legal reasons). Julia has also planned time for feedback and reflection after group discussions and activities surrounding the examples.

Project-Based Learning: For day two of the workshop, all participants will bring in something they are working on at work that is related to the workshop topic. Participants will have time to work on their individual projects after a quick group activity related to the workshop topic. Groups will reform to discuss each member’s project in length, and offer suggestions and comments. Each participant will then give quick summary of what was said in their groups about their project. Julia and participants will provide feedback and the workshop will end with time for reflection.

Training is as easy as ABC at ABC

Challenge: The Athens Babysitting Co – Op, a babysitting brokerage, has decided to offer babysitting training to all new hires. The company, which was founded by a group of educators, wants the training to be effective for all types of learners and address the different intelligences according to Gardner. The training audience will generally be teenagers and will need all babysitting related topics covered, e.g. first aid, baby care, referee/moderator, emergency response, etc.

Application of Multiple Intelligence Theory

A two step program will be used for training new hires at ABC.

First, new hires will work independently on selected readings that cover “how to” knowledge and babysitting basics. Many diagrams, charts, and visuals are included, as well as a video. (**Verbal/Linguistic**, **Intrapersonal**, **Visual/Spatial**, and **Musical/Aural**).

Secondly, new hires will attend a workshop that will focus on scenario-based training, connections to realistic events, classification of emergency information/procedures and group discussions (**Bodily/Kinesthetic**, **Mathematical/Logical**, **Naturalist**, **Interpersonal**, and **Existential**).

What can brown do for you?

Challenge: At UPS, Customer Counter Associates have always received little to no training. Starting in January, a new training program will be implemented.

Until then, what strategies can be used to aid new employees?

Application of Cognitive Apprenticeship Theory:

- Modeling:** Have an experienced counter associate model correct procedures
- Coaching/Scaffolding:** Have new hires role play with one another, while an experienced employee is available to answer questions & address concerns
- Articulation:** Have new hires describe their thought process while role playing
- Reflection:** Have new hires reflect upon responses in role playing & have experienced employee give feedback/critique
- Exploration:** Encourage new hires to find answers to their or a customer's questions

What can brown do for you?

Challenge: UPS has decided to redesign some of their training for the package handlers position. A package handler lifts packages from one conveyer belt to another depending on what part of the country the package is going to. This information is located on the UPS mailing label, there are many conveyer belts to choose from and the process is all done very quickly. New hires do not feel adequately prepared for their job based on the training provided (videos, text, demonstrations, and mentor). UPS is considering investing in a simulation type software to better prepare the new hires for their job.

Application of Goal-Based Scenario Theory:

A simulation will be created to mirror the environment that a package handler will work in. The simulation will be similar to a game and will hopefully therefore be fun and engaging, but also accomplish the goal of learning how to sort and handle packages. Learners will be required to sort and place packages on the correct conveyer belt. The simulation will provide a safe environment for the learners to make mistakes. In real life, a mistake could cost UPS business by a package going to the wrong part of the country. Incorrect placement will show a package going to the wrong city and a unhappy customer. As the learner continues to make correct placements, the amount of packages will increase and the conveyer belt's speed will increase until it is at the actual speed of the UPS environment. The simulation will record the score earned by each participant. Learners scoring 80% and higher will receive certificates for successfully completing the training. There will also be a feature for learners to access FAQ's and other related information about packaging handling.

What can brown do for you?

Challenge: At UPS, a dispatcher will contact a driver on route to let them know important customer information, i.e. a customer would like their package dropped off at the Customer Center as soon as possible, the customer is now home and would like their package redelivered, etc. Dispatchers are having trouble getting drivers to answer their calls and respond to their pages. When a supervisor calls or pages, the driver immediately responds. Dispatchers are not supervisors and have no authority over the drivers. Investigation shows that the drivers believe answering a dispatcher is a waste of their time and that their actions are not negatively affecting operations or the company as a whole, anyway.

Application of Conceptual Change Theory:

Drivers will attend a workshop where they will be challenged to individually think about how their choice of not answering the dispatcher negatively affects operations and the company as a whole. The workshop leader will prove to the drivers that their actions negatively affect the company using several video scenarios. The leader will then demonstrate how this, in effect, causes them to waste more of their time later by having to remedy the situation, for instance by redelivering the package. Drivers will then discuss their thoughts about this in small groups. Hopefully, the drivers will see the errors in their previous behavior and will answer the dispatcher from this point forward.

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Choice: Drivers are given the option to attend either a workshop or a small group meeting about this issue.

Control: Both options will follow the same outline and cover the same material, but with different approaches depending on which option the driver attends. The bigger picture will be emphasized in both options.

Challenge: Drivers will be challenged to individually think about how their choice of not answering the dispatcher negatively affects operations and the company as a whole.

Collaboration: Drivers will then discuss their thoughts about this topic in small groups.

Constructing Meaning: Each small group will construct an artifact of choice, displaying what they learned in regards to this topic.

Consequences: Artifacts will be displayed in the driver break room for all drivers to see.

ACC: Adults Coping With Cancer

Challenge: Janice is the educational director for the awareness/help group Adults Coping with Cancer (ACC). Each weekly meeting starts with an educational program about a topic related to cancer. The remainder of the time is for group therapy. Part of Janice's job is to create or arrange the weekly educational program. The group is comprised of 15 adults, ranging from 26 – 52 years old, 67% of the group are women. Every member in the group has been affected by cancer, either personally or through a loved one.

Adult Learning Theory: Janice believes in using the characteristics of adult learners, supported by adult learning theories and personal experiences. First, Janice attempts to assess what every group member knows by one-on-one chats before, during and after meetings. She also keeps abreast of the current news and research in the field. Secondly, Janice designs each educational program to be learner-centered and focus on a specific topic that relates directly to at least one group member. She encourages group discussions during and after the program where members can offer their personal experience and knowledge to add to the learning. Finally, Janice provides a plethora of valid information to the group members, including contact information of trusted medical practitioners.