

A Practical Guide to Designing Better Classes

3Rs of Education: Relationships, Resilience and Reflection

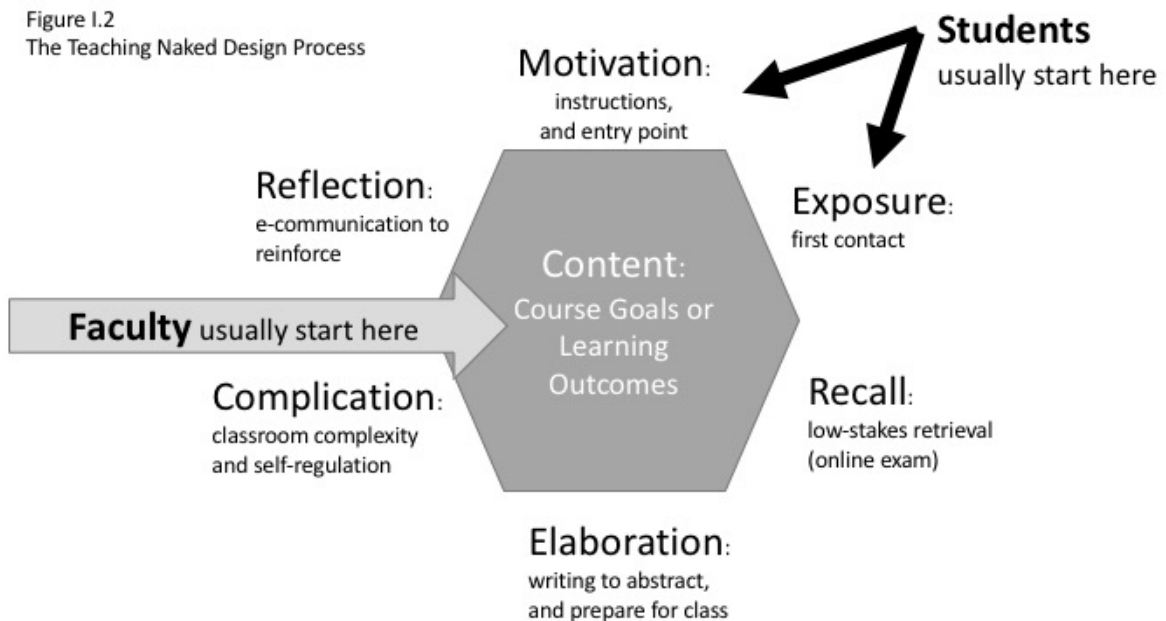
- Smart is the ability to change your mind
- Thinking, Design and Integration are now more important
- Technology** is a tool, not a strategy
- Learning is about **change**

The Scholarship of Teaching and Learning

Make It Stick: The Science of Successful Learning. (Brown, Roediger & McDaniel)
Exposure, rereading, highlighting and massed practice = false fluency NOT learning)

- **Concrete and Personal** (matters to me, examples)
- **Knowledge is Necessary** (but not sufficient)
- **Retrieval and Self-Testing** (online exams, games)
- **Elaboration** (connections, analogies, writing)
- **Abstract** (extracting rules, larger context, mental models)
- **Failure** (add difficulty, attempts before solutions, feedback)
- **Interleaving** (varied practice, space out practice)

Teaching Naked Design Process

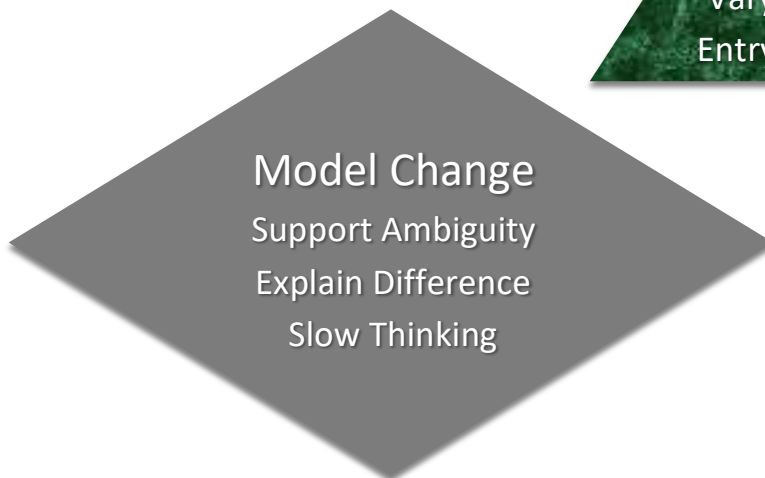
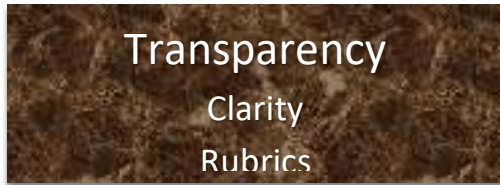


Targeted Universalism

John A. Powell (2008).

Post-Racialism or Targeted Universalism Denver University Law Review, 86, p. 785-806

Good Teaching is Inclusive Teaching



Learning Outcomes (and why they matter)

- write a learning outcome and design a module

Remembering (know, define, repeat, describe, identify, recall, list, tell, locate match)

Understanding (comprehend, classify, convert, explain, summarize, predict, discuss, compare)

Applying (demonstrate, modify, arrange, solve, relate, apply, examine, classify, illustrate)

Analyzing (infer, estimate, order, separate, subdivide, distinguish, contrast, categorize)

Evaluating (critique, justify, discriminate, support, conclude, judge, verify, assess, argue)

Creating (synthesize, design, formulate, revise, construct, compose, invent, imagine, propose)

(Bloom, B.S., Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain. New York: David McKay Co Inc. 1956,) Taxonomy revised by Lorin Anderson. Designed for higher education, it is now pervasive in almost all curriculum design—even dog trainers use this.)

Syllabus

Tone and Transparency Matter

See Template

eCommunication Policy

- The best way to contact me is: _____ (email, FB, Google+, LinkedIn)
- I will respond to e-mail (or FB chat, messages etc.) within _____ hours, except on ___ or between _____ (9pm and 9am etc.)
- I am online (FB/Skype/Twitter) _____ on ___ days and also available for _____
- If you want an individual (physical/Skype/chat) appointment _____ me
- I accept/do not accept Skype/Facebook/LinkedIn friend requests (until graduation).

Backchannels in F2F Classrooms

Need	Sample Uses	Tools
Chat or Q&A	Share resources Ask question Respond to prompts Clarify Comment	GoSoapBox.com Twitter or Google Slides Mentimeter (Q&A type slide) Tricider Teams/Zoom Chat BackChannelChat.com
Word clouds & Open-ended responses	Lists of ideas Unclear concepts Rephrase an idea Examples or Applications	Mentimeter (word cloud, open-ended) AnswerGarden Padlet (visual board)
Voting, Polling & Quizzes	Discover baseline Answer questions Check understanding	Mentimeter Poll Everywhere Socrative Google Forms Tricider GoSopaBox (“confusion barometer”)
Visual, Brainstorming or Jamming	Collect & connect ideas Share images Play with concepts	Padlet.com Mural.co Jamboard.google.com

Rubrics

See Template

Online Content and First Exposure

- identify discipline-specific online content or organize a podcast

1. Finding Tools and Content in Your Discipline

- Lectures & Demos: utubersity, iTunesU, Khan, YouTube, OpenYale, MITOpen
- Other Content: Merlot.org, Google, Wikipedia, universities, governments
- Courses: Udacity, UoPeople, Coursera, EdX, OpenYale, MITOpen

2. Podcasts

- Videos of lectures are a type of podcast
- Real podcasts are better: *teach to the many, not to the middle.*
 - use chapters: organize and give students more control
 - time is no longer an issue
 - use multiple, redundant and alternative examples
 - add something for advanced students (the others can skip
 - recycle
- Start Small

3. Games

- New Games
- Free Games: Merlot, SeriousGames, EducationArcade, iTunes (apps) GameScene, TheProblemSite, FreeOnlineGames, GameNode, MiniClip

Instructions and Entry Point

- find an appropriate entry point and write conditional instructions

1. Motivating Reading

- Consider the length of reading assignments in relation to your learning outcomes.
- Tell students *why* they are reading in advance.
- Analyze the opening *before* you assign the reading.
- Tell students in advance why the ending is important.
- Email students between classes about specific passages.
- Encourage students along the way using twitter or email.
- Require students to reflect on the entire reading in writing before class
- Give a reading quiz before every class
- Structure class activities or assessment to reward those who did all of the reading.
- Avoid punitive measures.
- Coordinate courses across the curriculum.

2. Using Summary Sites

- Know and understand the competition: sparknotes, Wikipedia, CliffsNotes, PinkMonkey, gradesaver, enotes, bibliomania.
- Convince students to read just a few chapters first.
- Ask students to read the summary first and discuss how it changes the experience.
- Ask students to compare summary sites.
- Make your assignment more about style or character than plot.
- Ask an unusual question (that won't be answered by the summary)

3. Entry Point

- Start with what matters to students, then connect with what matters to you
- Motivation and Contemplation
 - “Find something interesting to you...”
 - “Look for different perspectives...”
 - “Stop, linger, and imagine...”

4. Conditional Instructions -- Teach with uncertainty

- This could be the best solution, vs. This is the best solution
- How could you design a bra that only opens if you are in love? vs. Could you?
- What would be required for a nasal contraceptive to work? vs. Is it possible?
- Usually you want the patient lying down, vs. First, get the patient to lie down.
- The current theory is... vs. This is...

Online Exams to Improve Student Preparation for Class

- formulate sample test questions using Bloom levels
- Create more class time
- Use your LMS
- Improve your preparation
- JiTT

Question Format:

Question 1 (Analysis Level)

The following are all true statements.

Which are most likely to be used by Dems/Repubs to support government policy?

Check all that apply. Partial credit is avail

- Government spending creates jobs.
- Tax cuts stimulate job creation.
- Uncertainty is bad for business
- A large debt can hurt the economy.
- Government spending cuts can hurt the economy.

Which are fact, opinion or judgement?

Which are most relevant in arguing for Y?

Which are most relevant in arguing against Y?

Better Multiple Choice Exams with Bloom Levels

KNOWLEDGE (recall and recognition)

- Which of the following are important theories of X?
- Identify which of the following are symptoms of X?

COMPREHENSION (understanding examples, meaning, and extrapolating)

- Which of the following is an example of X?
- Which of these are summaries of X?

APPLICATIONS (organize or solve with new situations or terms)

- Which of the following Y might be most useful to X?
- What would be the best way to improve X?

ANALYSIS (breaking apart, compare and contrast, generalizing)

- Which of the following statements from article X are fact/opinion?
- Which of the following facts (all true) are most relevant for the argument X?

SYNTHESIS (combining elements into a new patterns)

- Which of the following statements about X (all true) would be best evidence in SUPPORTING the argument Y?
- Which of the following are restatements of the thesis in article X from a person who disagrees?
- Which of the following develop the thesis of X further?

EVALUATION (presenting and defending judgments)

- Which of the following statements about X (all true) would be best evidence in REFUTING the argument Y? (Same set of answers to chose from.)
- Which of the following represents the strongest argument for why...?
- Which critique of X is most compelling?

Question (Analysis Level)

The following are all true statements about Jimmie Lunceford and Duke Ellington. Which of them are most relevant to why each (or both) are important to the history of jazz? (Check all that apply. Partial credit is available.)

Answer (and percent correct for each answer) Average score = 0.89 out of 2 points.

- | | |
|---|---------|
| Y - Lunceford and Ellington both treated jazz as a serious art form. | 69.725% |
| N - Lunceford was famous for his slightly old-fashioned 2-beat swing feel (instead of the increasingly common 4 swing feel). | 45.872% |
| Y - The Lunceford band was extremely well rehearsed and could play together very precisely. | 55% |
| Y - Ellington was interested in the unique and individual timbres (sound and way of playing) of each member of his band and mixed these particular textures rather than just using the entire section as a similar sounding unit. | 95.413% |
| Y - Duke Ellington performed for floor shows for a white audience at the Cotton Club from 1927-1932. | 53.211% |

Assignments

- create an assignment as class preparation

Motivation: **why** are we doing this? (goal & how it connects to learning outcomes)

Clarity: around **expectations** (how long & how should this time be divided?)

Checklists: what are the **parts**? (do I think, research, write, draft, edit?)

Rubrics: share **in advance** (what matters and is most valuable)

Spacing and Interleaving: (can I do this all in one sitting?)

Relevance: (can I enhance motivation by choosing better examples?)

1. Types of Assignments

Practice - problem sets

Writing - more focused prompts

Prepare for something -

Make a list -

Find something -

Analyze something -

Case Study -

2. Writing to Process and Prepare for Discussion.

- Index cards: Position Papers, Favorite Quote, Biggest Hole, Most Powerful
- Bring essays to class and have students respond in writing to each other.

3. Better Prompts

- What does the text say?
- How do you/others interpret this text?
- What problem might there be with this method/theory?
- What is the main argument the text is making?
- What is the most important evidence for this argument?
- What is the main bias or assumption of the author?
- How do you understand this text?
- How does this text do a good or poor job of conveying its message?
- Why is this passage important?
- Why is this passage disturbing?

4. Peer-Review Writing

- Tell students it will be read by other *students*.
- Share essays online before class on a discussion board.
- Peer-Review Rubrics
- Calibrated Peer Review (CPR)
- Inkshedding

Massively Better Classrooms

- develop class activities as extensions and applications

EXAMPLE: Bring to class a pitch for a meeting in New York. Then in class, surprise:

1. Alter conditions

- the meeting has been moved to Tokyo
- the client has changed the request

2. Change data

- the product failed a recent test
- the demographic data you used was flawed

3. Extend conditions

- the marketing person is sick: you're on

4. Complicate

- your competition has just released a better technology/product

5. Use in activity

- 10-20 minutes to do new research and make the changes.
- make presentations, submit revised plans or write about the change process.

6. Use in discussion

7. Reframe the problem

- how might you have prepared differently?

Other forms of interaction (no-tech)

- Active Learning to Motivate Change
- Role Playing: Reacting to the Past: <http://reacting.barnard.edu/>
- Collaborative Learning
- Writing and Editing
- Reading
- Problem Solving
- Reflection
- Studios or Labs

Primary Sources Assignments

- Controversy
- Error Regression
- How Does it Work?
- Needle in the Haystack
- The Creative Process

Better Discussions

Thinking with others

Group polarization

Clarify good student discussion behaviors

--comments that introduce substantive points

--comments that deepen the discussion

Structure (be flexible)

Grading (be creative)

Practice (student and faculty)

--Discourse on Pizza (online)

- **Anonymous Polls First (like a jury)**

- **Prepare Opening Statements (or write first)**

- **Neutral and Two-Sided Questions**

- When private beliefs are at stake, you dig in
- “How many different explanations can you...”
- “Can you think of both an example and a counter-example?”

- **Build Common Purpose/Problems/Goals**

- Groups build trust over time
- Encourage compliments
- Explain Relevance

- **Articulate Academic Process**

- Use a Rubric
- Engage in Meta-Analysis of the Discussion
- Create Ambiguity
- Assign Roles (Evidence Watchdog)
- Structured networks - Shield identities

- **Diverse Groups & Encourage Outliers**

- **Clear Learning Outcomes**

- find the right entry point
- enhance intellectual curiosity
- confront contradictions
- challenge beliefs
- deepen investment in the material
- reflect on the significance of material
- connect information across disciplines
- demonstrate the human dimension

- **Preparation (student and faculty)**

- provide in advance:
 - model of good behaviors
 - learning outcomes
 - reading guide and questions
- ensure student preparation
- prepare a short list of different types of questions

Class Bingo

Class is boring	Ringtone	Handouts missing	Flirting couple	Pen Clicking
Uses class time for movies	Professor answers cell phone	Trouble with Powerpoint	Professor apologizes for making her "intro" too long.	Professor wanders off on tangent
Professor forgets the topic	Student falls asleep	FREE SPACE = Someone on Facebook	Professor complains there is too much to "cover"	TA does not have a clue
Professor makes obscure reference to his own research	Mystifying reference to pop culture that is 30 years out of date	Incomprehensible question from "I'm the smartest kid in the room"	Professor finally provides information that would have made the reading/assignment useful/interesting.	Professor goes over time and then asks "Are there any questions?"
Obviously not "coffee" in the thermos	Someone eating an entire meal	Allows the same student to walk in late every day	Professor makes excuses for not being prepared	Professor wears socks and flip-flops

Better Class Bingo

		FREE SPACE = Discussion		

Study Scaffolding <https://teachingnaked.com/study-smarter/>

- customize study habits and time on task framework
- see templates

Study Smarter: Part 1

Reflect: How much time did you need to get the grade you want?

Choose Strategies: Which resources and activities will be most useful

Plan & Implementation: What will you do when and where?

Study Smarter: Part 2

Reflect: What did you actually do?

Adjust: What worked the best?

Revise Your Plan: What will you do differently?

Cognitive Wrappers

- customize a cognitive wrapper (see template)

Reflect

Compare

Adjust

More Inclusive Teaching

Acknowledgement and Self-Awareness

Your accent and “common sense”

Demonstrate your own failings

Set expectations for diverse viewpoints (class + syllabus)

Demonstrate Caring and Support

Acknowledge differences

Learn names and pronouns (pre-class survey)

Articulate difficulty

Transparency

Structure, clarity, scaffolding, checklists

Rubrics make visible your own assumptions, biases and expectations

Content

Diversify your content and perspectives

Diversify Examples and Analogies

Vary names, problems and analogies

Different Questions

What assumptions led to this discovery?

Who benefited?

Who is missing and why?

Highlight scholarly achievements of minorities

Who else can you highlight?

Ask for early and specific feedback

Inclusive Teaching & Contentious Issues

1. Develop Trust

Listen First: Listen before you speak and question your own assumptions.

Talk Straight: Be honest and tell the truth. Use simple language.

Demonstrate Respect: Show you care for others genuinely.

Create Transparency: Be honest, open and authentic.

Right Wrongs: Apologize quickly and make restitution.

Give Credit: Be loyal to the absent.

Hold Yourself Accountable First: Take responsibility.

Extend Trust: Don't withhold trust because there is risk involved

(Adapted from The Thirteen Behaviors of a High Trust Leader in Stephen Covey from The Speed of Trust)

2. Start with How

Leonid Rozenblit & Frank Keil (2002). The Illusion of Explanatory Depth

3. Articulate the Underlying Tension

Distinguish between **problems** (to solve) & **tensions** (to manage)

Innovation & Efficiency

Safety & Cost

Control & Freedom

Change & Stability

Individual & Collective

Liberty & Justice

Freedom & Equality

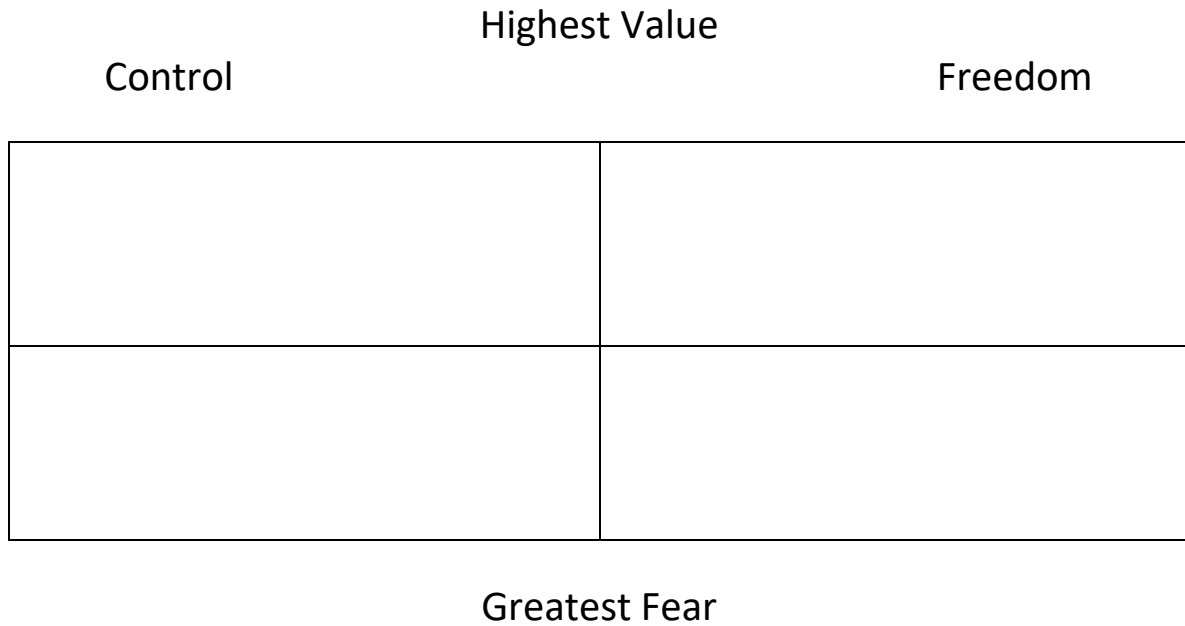
Problems to solve have endpoints and choices.

Tensions are not choices.

Multiple solutions, No right/wrong; No endpoint: Yes/Yes.

Choosing sets up the pendulum.

Polarity Map



4. Build Bridges and Find Shared Values

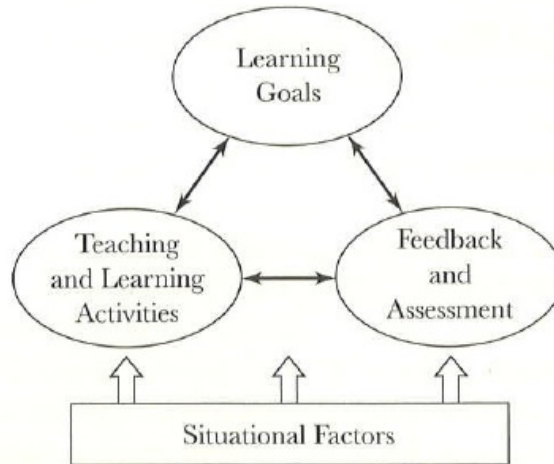
Start by acknowledging your opponent's greatest fears (the downside of your preference).

Invite others to hold complexity and tolerance for ambiguity.

Integrated Course Design

- Edit and reduce content: what do you want students to remember in five years?
- Integration is more important than volume of content.
- Course design integrates goals, activities and assessment.

FIGURE 3.1. KEY COMPONENTS OF INTEGRATED COURSE DESIGN.



- Sequence should support learning goals.
- Technology expands the possibilities for what happens where.
- Class time is expensive and precious: put the most difficult learning there
- When and where is the best first contact and can you facilitate the entry point?
- When are opportunities to deepen learning or provide feedback?

Design a Learning Module

Before Class		In-Between		In-Between	
	In Class		In Class		In Class

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Teaching Naked: *How Removing Technology from your College Classroom will Improve Student Learning* (San Francisco: Jossey-Bass, 2012). AAC&U Ness Award 2013

Teaching Naked Techniques: *A Practical Guide to Designing Better Classes* with C. Edward Watson (San Francisco: Jossey-Bass, 2017).

Teaching Change: *How to Develop Independent Thinkers Using Relationships, Resilience, and Reflection* (Johns Hopkins University Press, 2021) **NEW!**