Teaching Christian Stewardship using Design Method

by Craig Rusbult

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A logical extension of my PhD dissertation (about **Scientific Method** and its potential applications in education) is a model of **Design Method** for **problem solving** in most areas of life, for the design of a **product, strategy, or theory**.

**Introduction to Design Method**

[ google: design method in education ] #1
[ www.asa3.org/ASA/education/think/intro.htm ]
In design method you define a **PROBLEM** \{if NOW ≠ GOAL\} (an **opportunity** to make things better) and **GOALS** (decide & describe the desired characteristics of a "solution" that would make things better) (what is wanted?)
generate options for a solution, and for each option compare your goals with predictions (from mental experiments), and/or observations (from physical experiments), and then analyze-and-evaluate, and decide.
Design Method is a framework that promotes creative-and-critical improvisational thinking. The “method” is like a flexible improvising hockey skater, not a rigid choreographed figure skater.
Design method is a framework that promotes creative-and-critical improvisational thinking, so it is useful in a **thinking skills curriculum**. (between classes or within a class)

A model of **Design Method**
connects **DESIGN**
(in engineering and other fields)
with **SCIENCE**
which is the **designing of theories about nature**
based on **REALITY CHECKS** that test whether **the way you think the world is**
(according to the theory you’re testing)
matches **the way the world really is**.
Quality Checks - Design
Reality Checks - Science
a MODEL can be taught at different levels of detail

![Diagram showing the relationship between goals, predictions, science, observations, and evaluation of options.](image)
The Scientific Method? (no), scientific methods? (yes)
You can use Design Method in a **thinking skills curriculum**.
(coordinated between classes, or within your class)

Design can be repeated in the same course, with different problems, to help students learn a **disciplined approach to problem solving**.

**Goal-Directed Education:** 1) Provide Opportunities to Learn, 2) Direct Attention to what can be learned. [google]

And because **design is used in all subject areas**, **design method** can be used as a **transitive connector** between areas, to facilitate **transfer of thinking skills**, which should be a major goal of education.

For more, google [design method in education].
Finding effective solutions for ENVIROMENTAL PROBLEMS requires flexible non-specialized thinking,

and DESIGN METHOD provides an integrative structure for a disciplined interdisciplinary solution-seeking process.

usually, environmental problems have broad scope, complex with multiple factors (in wide range of fields)

result of design can be:

PRODUCT = new technology
THEORY (ex: Global Warming)
STRATEGY = Policy Decisions
(maybe to use an old technology)
STRATEGIES = Policy Decisions at different levels
( private - individual, family, church, business )
( government - city, county, state, national, international )

We'll look at design method and education in the context of current environmental challenges with examples for energy conservation, global warming: **cooling (Cool Biz)** & Warm Biz (warming) to illustrate appropriate use of science & technology. **Cool Biz** - less use of air conditioning in summer, **Warm Biz** - less use of heating in winter. (65°F)

**Cool Biz** seems more interesting for me, because cold weather can be dangerous, heating is NEEDED, hot weather can be bothersome, cooling is WANTED. Air Conditioning is LUXURY ITEM. (personal ii)
Cool Biz — Ideas & Facts

**GOVERNMENT** in Japan, 2005 (to now?)

set air conditioning at 28°C = 82°F

short-sleeve shirts, no jacket or tie (these are the main clothing policies)
  + extra tips: trousers (breathe & absorb moisture), starch collars (so stand up)

**CULTURE IN JAPAN**

• no suit & tie = not dignified for self, not respectful of others
  govt workers awkward in public (commute, meeting w private business people)
  Prime Minister Koizumi - interviews w no tie or jacket, advertising for CBz, PR
  “Concerned about global warming, Japanese customers avoid firms with chilly temperatures during the summer season, considering such energy use wasteful and even shameful.” (“equivalent of unnecessary trips in gas-guzzling automobiles”)

*Would this be the response in US? or would customers go to the cooler stores?*

Jimmy Carter, Warm Biz 1977 - turn thermostat down to 65°F (minimal response?)

**PRIVATE** - 3 largest banks (1630 branches) in Japan
also - **South Korean** Ministry of Environment, **British** Trades Union Congress

**Baylor?** dorm room = 71°F (22°C),
Cool Biz — Ideas & Facts (continued)

results: CO2 drop: 2005 (1.0 million households for 1 month), 2006 (2.5 million)

POSSIBLE DISADVANTAGES:

• decrease in efficiency of workers?

• negative health effects? (tough on overweight people, with more insulation)
  drink water, use fan (improve natural physiological cooling-evaporation)
  psychology (if think + or –, likely to be + or –? (individual physiology?)
  ex: me in WI (no AC, 3rd floor, 78-95), summer 1995 (>98, all day ok), training
Consider the effects of ETHICAL PRINCIPLES:
[google: christian worldview education]
[ www.asa3.org/ASA/education/views/wvb.htm ]

- **greatest good for greatest number**
  (but who decides “greatest good” & enforces policy? )

- **Rawls** - Veil of Ignorance - imagine policy decisions
  if you don’t know: who, where, what, how much,…

- **Game Theory** — ex: game, cooperators versus renegades;
  if all cooperate the average payoff is highest, but
  if one (or more) renegades, they gain & others lose;
  what happens? after awhile, more & more stop cooperating.
  --> Patty (bothered, irrational for people to not cooperate),
      U.S. Constitution (acknowledge sin, use power-checks).
Tragedy of the Commons:
If every person behaves in own best interest (*renegades?*),
the result can be a decrease in quality for overall community.
Why is this a tragedy? two virtues: freedom + common good

• If you teach at Christian school and want to live dangerously,
  from each according to abilities, to each according to needs.
  (in principle ≠ in reality, rule-makers know [Rawls], motivation)

American Christianity: What is American, what is Christian?
Acts 2 & 4 socialism? voluntary private ≠ government forced

a reality-based effective practical solution must take into account:
  practical psychology (at level of individuals)
  practical sociology (at level of groups)
  practical economics (an important factor)
explore the +s and −s of various options (Monday vs Tuesday)
Christian Stewardship as a Whole-Life Worldview

[ google: christian stewardship worldview ]
( links-homepage, Keith Miller who was source of my idea )
[ www.asa3.org/ASA/education/views/stewardship.htm ]

WORLDVIEW: A view of the world, used for living in the world.

Bible-based principles that include

loving your neighbor as [much as] you love yourself
(in the same way, with same motivation and reasons)
(circles of decreased caring: self, family, friends, city, nation,…)

love God with whole heart, mind, soul, strength
as foundation and power source (John 15) for loving neighbors,
for always living by faith in obedience to God’s commandments.