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Allowing Human-Centered Narratives to Shape Design Processes

Teaching Design Research

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When "Design" Precedes "Research:"

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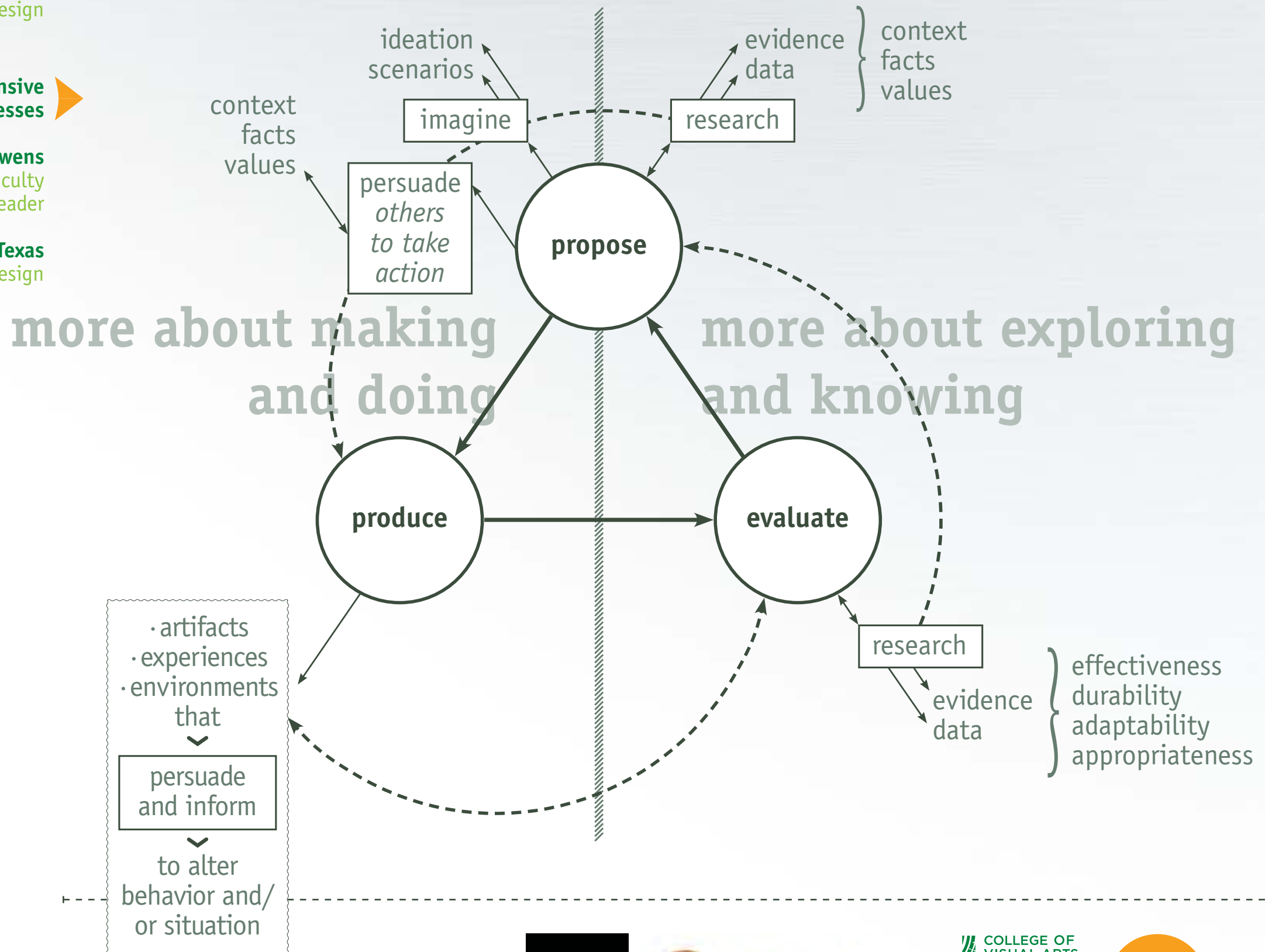Graduate Programs Coordinator
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**Comprehensive
Design(ing) Processes**

Articulated by Keith Owens
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more about making and doing

more about exploring and knowing

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Introducing the "Foundation Planks" of Design Research: *Part One of Four*

Understanding the context for design research

Design processes are no longer limited to yielding artifacts, products and services;

Design processes now operate to shape significant organizational and social change;

Design processes have evolved from being relatively simple and linear and guided solely by "the designer" to being complex and cyclic and now require input from diverse stakeholders.

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Introducing the "Foundation Planks" of Design Research: *Part One of Four*

The decision-making processes that guide design research may or may *not* yield cool-looking artifacts that might one day grace the pages of *Graphis, CA, Print,* etc. This now constitutes the floor, not the ceiling, of design's potential.
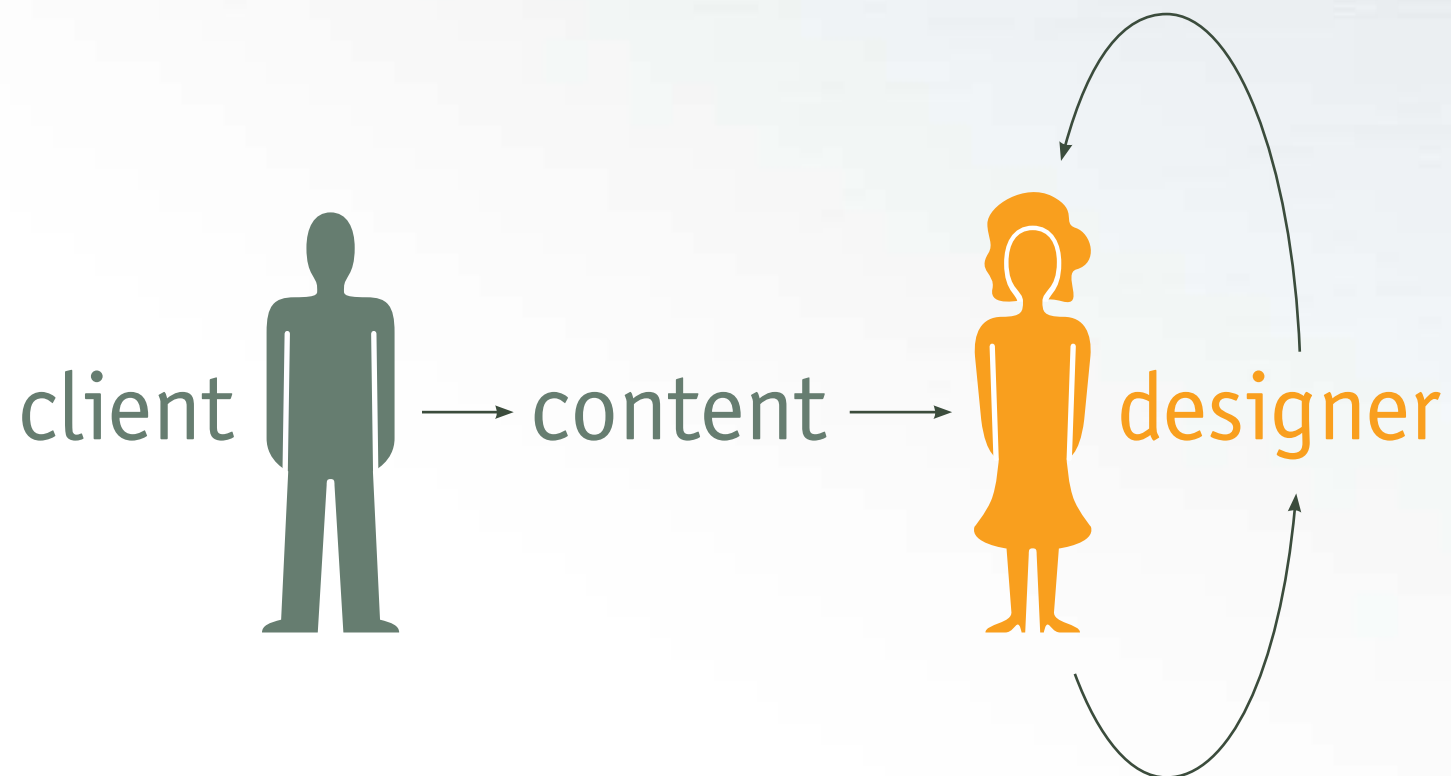
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Introducing the "Foundation Planks" of Design Research: *Part One of Four*

It may help to begin by understanding how design research processes are different from the design processes that are (and have long been) taught in many visual communication design programs...
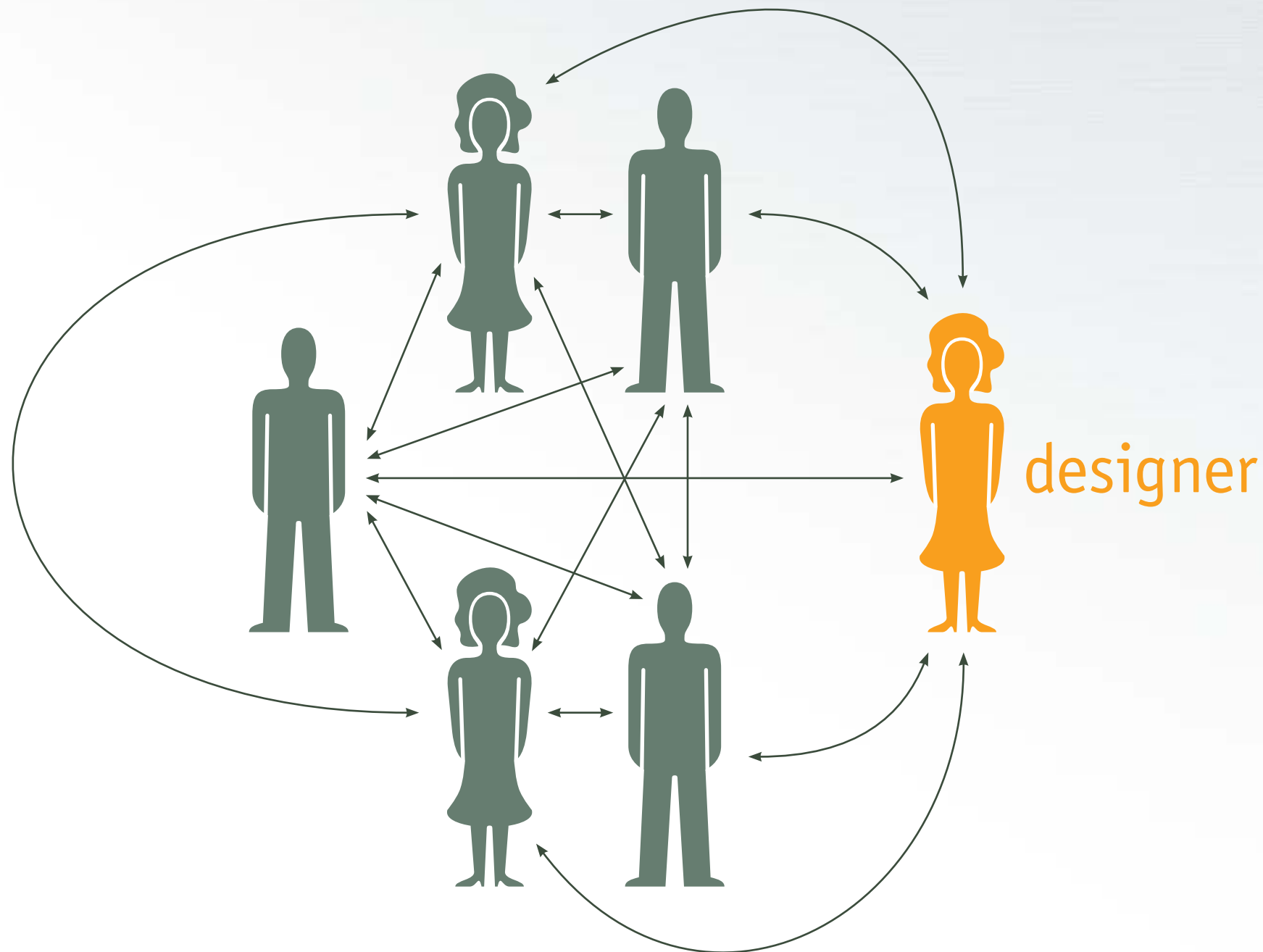
client → content → designer

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designer

Design research is informed by working relationships that:

- invite collaboration among *key stakeholders*
- separate content from process
- are adaptive

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Introducing the "Foundation Planks" of Design Research: *Part Two of Four*

You're *not* going to learn to "do" design research in a two-hour workshop like this one...
...but you will learn to begin to facilitate it with your students and per-project collaborators (most of whom will equate design with "using software to make stuff look cool.")

You'll also learn what makes design research different from other approaches to research, and you'll gain some initial experiential knowledge about how to *design* design research.

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# Introducing the "Foundation Planks" of Design Research: *Part Two of Four*

If you wish to effectively change a "less-than-desirable situation," you'd better understand the *social, technological, economic, environmental* and *political* factors, structures, actors and issues that are affecting it *before* you "plunge in."

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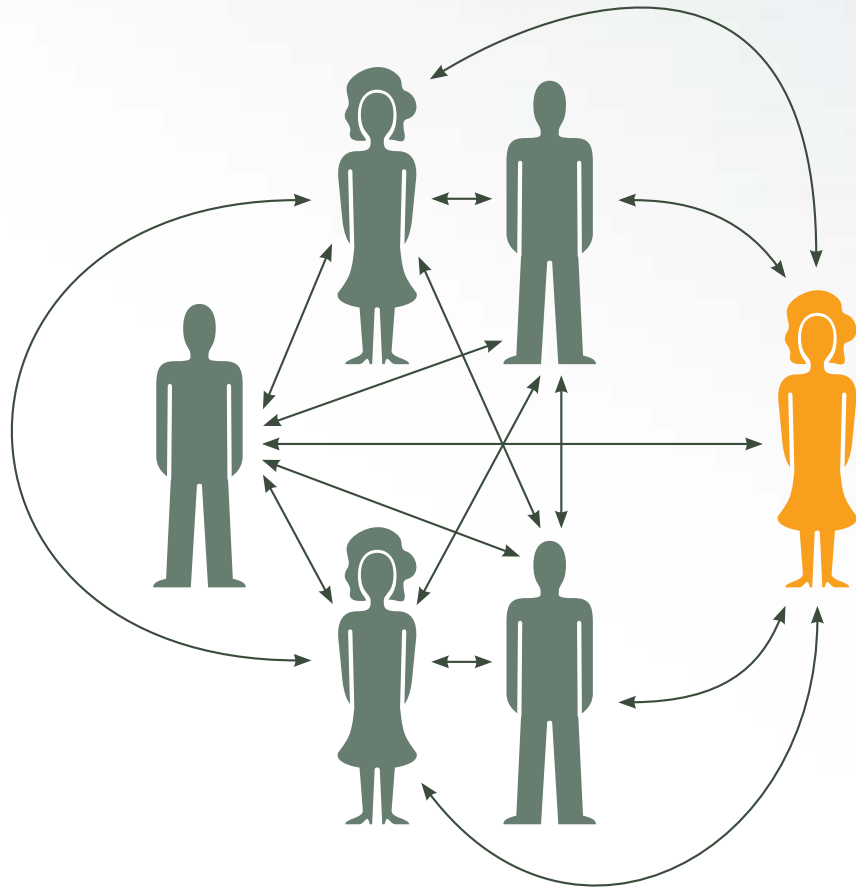
S = Social
T = Technological
E = Economic
E = Environmental
P = Political/Public Policy

Design research connects exploring and knowing with making and doing, which facilitates **cycles of participation.**

Initial rounds of interactions between stakeholders yield *data,* which is then *analyzed* and, as a result, becomes *evidence* that guides the formulation of *questions.*

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Introducing the "Foundation Planks" of Design Research: *Part Two of Four*

Research questions that effectively guide design research processes are *not* assumptive/assertive

Assumptive/Assertive

"We're going to design a chair..."

"We're going to design an app..."

VS.

Inquiry-Based

"How should we design a machine for sitting?"

"How can we help diabetics manage daily challenges?"

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Introducing the "Foundation Planks" of Design Research: *Part Three of Four*

Working subjectively while working inductively

Design research is initiated by someone/a group(s) deciding that a given situation affecting a select population is *failing* to meet the needs of that population in some way.

"Failure, not necessity, is the mother of invention." —Henry Petroski

Those who can best articulate definitions re: failure tend to wield more S.T.E.E.P. power.

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Introducing the "Foundation Planks" of Design Research: *Part Three of Four*

When working inductively, remember Sherlock Holmes
Contrary to what is often referred to as his "powers of deduction," Holmes actually worked *inductively* to analyze the data he gathered to support the probability of a given conclusion, or to advocate for a given course of action. This is also often how design research processes work.

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Introducing the "Foundation Planks" of Design Research: *Part Four of Four*

Just because you desire to "do good design," doesn't mean you're "doing design research"

Designing to improve a given S.T.E.E.P. situation on behalf of a particular population group is

· honorable,

· sometimes accomplishes this goal,

· has the potential to make the designers who are engaged in this type of work feel better about themselves, *but—*

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Introducing the "Foundation Planks" of Design Research: *Part Four of Four*

it's *not* (design) research if it fails to...

1 | Yield new knowledge or understanding

a. on behalf of (at least) the designers and their collaborators/co-participants

b. be guided by a *research design process* that facilitates the operation of methods and procedures to gather and analyze data

c. that can be shared with others confronting similar situations in a way(s) that allow them to utilize and (sometimes) replicate and even validate the *research design process*

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Introducing the "Foundation Planks" of Design Research: *Part Four of Four*

The proposal guidelines articulated in this year's AIGA Design Faculty Research Grant might help introduce design research to some:
http://educators.aiga.org/call-for-proposals-2013-faculty-research-grant-x/

Whether you plan to submit a proposal or not, reading through this document will reinforce one the most fundamental tenets of research—

"You have to follow a plan…"

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Introducing the "Foundation Planks" of Design Research: *Part Four of Four*

One basic premise for design research

"…spending time in the contexts where people do the things that they do can inform and inspire the design process with a nuanced understanding of what drives people's behaviour—which can then used as a foundation for understanding and exploring the opportunities for new products and services."

—Jan Chipchase, Executive Creative Director of Global Insights, Frog

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An altered basic premise for design research

…spending time in the contexts where people do the things that they do can inform and inspire the design process with a nuanced understanding of what drives people's behaviour—which can then used as a foundation for…

?

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Research in the Deductive Mode (i.e., without "Design" Preceding It)

What most of you most likely learned in college re: research processes (if you spent any time learning about research processes at all...):

Phase One

(theory) > (formulate hypothesis) > (devise research design) > (determine metrics) > (select sites + subjects)

Phase Two

(operate research tools) > (process data) > (analyze data) > (determine conclusions) > ("report out" (publish & present))

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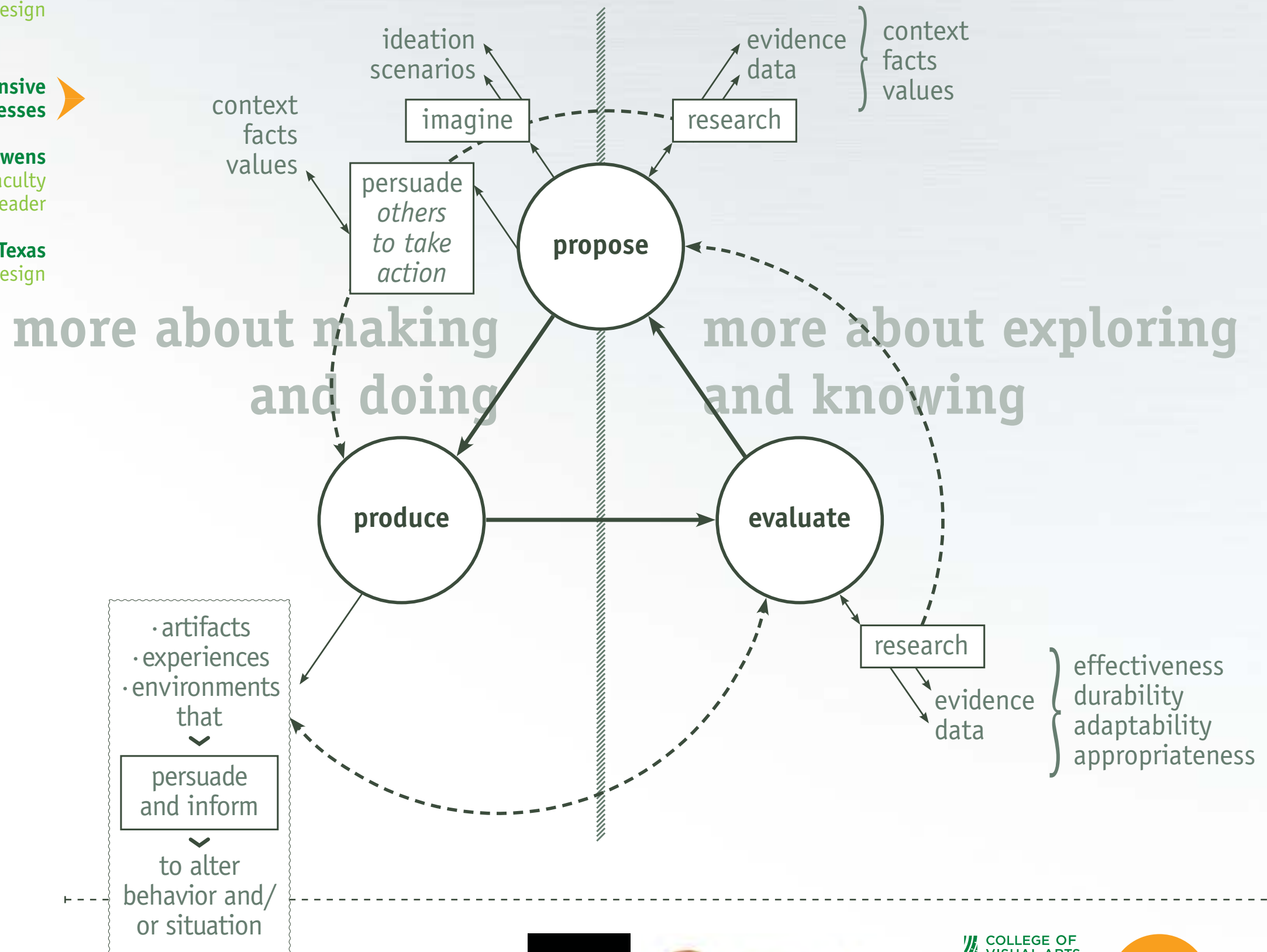Applied Design Research

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ideation scenarios

evidence data } context facts values

context facts values

imagine

research

persuade *others to take action*

propose

more about making and doing

more about exploring and knowing

produce

evaluate

· artifacts
· experiences
· environments that
⌄
persuade and inform
⌄
to alter behavior and/ or situation

research } effectiveness durability adaptability appropriateness

evidence data

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It's Time for You to Participate in Designing Design Research

Now that you've gotten comfortable…
Please get up from your current seating location and move to another table/group of chairs where you don't know anyone.

Please make sure there are only *four* people at your new seating location.

Briefly introduce yourself, and allow yourself to "get comfortable with being uncomfortable."

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Identify/Choose a "Less-Than-Desirable" S.T.E.E.P. Situation: *One*

Here are some possible challenges to confront:

· instead of designing "another cool poster/ PSA campaign/app/website" on behalf of your local Goodwill operation, develop, test, evaluate and finally suggest three to five ways they can utilize their resources more effectively >> as you engage in these processes, consider how your actions—which will necessarily involve a variety of people in and around that Goodwill—have the potential to *positively transform* that organization…

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Identify/Choose a "Less-Than-Desirable" S.T.E.E.P. Situation: *Two*

Here are some *more* challenges to confront:

- if an app is to effectively augment design students' constructive criticism of each other's coursework as it progresses, what should its essential functions be? how should they operate?

- what is/are the best way(s) to discourage bottled water drinking among _____?

- what means/materials are most likely to help children with learning disabilities read better?

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Identify/Choose a "Less-Than-Desirable" S.T.E.E.P. Situation: *Three*

Here are still *more* challenges to confront:

- what types of experiences and environments should be designed to encourage people "who can't put their *^%$#§~!! smartphones down" to learn to live in the moments that surround them, and to be comfortable with being alone

- what are the most effective ways to train a cat to properly and consistently use a toilet designed for humans?

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Identify/Choose a "Less-Than-Desirable" S.T.E.E.P. Situation: *Four*

Here are still *even more* challenges to confront

- how can smartphone technology more effectively meet the needs of the illiterate?

- how can "design thinking" help facilitate problem-solving among groups in high schools?

- utilize evidence-based methods to inform the development of three to five methods K-12 teachers can operationalize to *effectively* introduce the design process to their students

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Identify/Choose a "Less-Than-Desirable" S.T.E.E.P. Situation: *Five*

And on and on...

- what are the most effective ways to design the experience of "lunchtime" in middle- and elementary school cafeterias to encourage young people to develop healthier eating practices and to promote physical wellness?

- what are three to five realistic strategies rural/ semi-rural communities can adopt and sustain to re-vitalize their socio-economic cores, and to attract investors and families to them?

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Making Design Research Actually Happen

A. Choose & critically analyze a failing situation

Work together to articulate *what it is* about a specific "less-than-desirable" situation that *might be* causing its failure. (Due to our time constraints, please choose from among the examples provided).

B. Preliminary research

Propose and list sources for gaining *evidence*—case studies, scholarly articles, eyewitness accounts, etc. —re: your situation. Identify key stakeholders, as well as the factors, issues and agents "at play."

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Making Design Research Actually Happen

C. A bit of role-playing between groupmates

Groupmates need to discuss how initial data might be gathered to inform this process. Ask yourselves: "what do we need to learn to prevent us from working assumptively?" *Etic* observations—which involve observing what people do and how they behave in given situations—can help you account for what people actually do, rather than what they say do. *Emic* interviews with key stakeholders can reveal how particular biases, perceptions and other factors, issues and agents affect *real people*.

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Making Design Research Actually Happen

D. configure your material into a concept map

Groupmates must now work together to arrange the material they will have articulated during steps A-D onto 3″ x 5″ cards and/or Post-It Notes™ onto either a pieceof poster board or a large Post-It Note™. The process of configuring a concept map allows for both the analysis and synthesizing of important evidence and data in ways that help design researchers and their collaborators account for how matters of *context, fact* and *value* affect each other within the chosen situation.
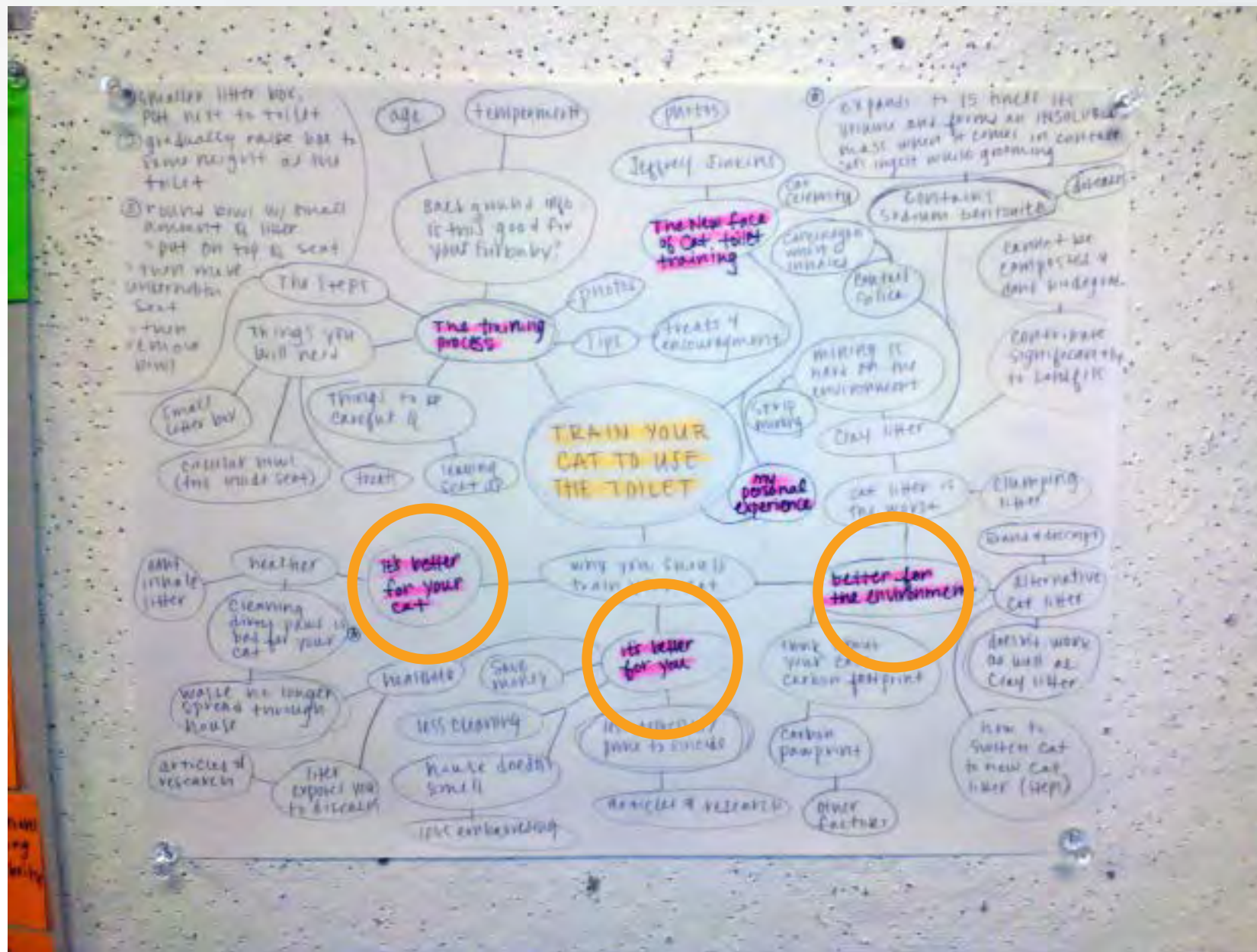
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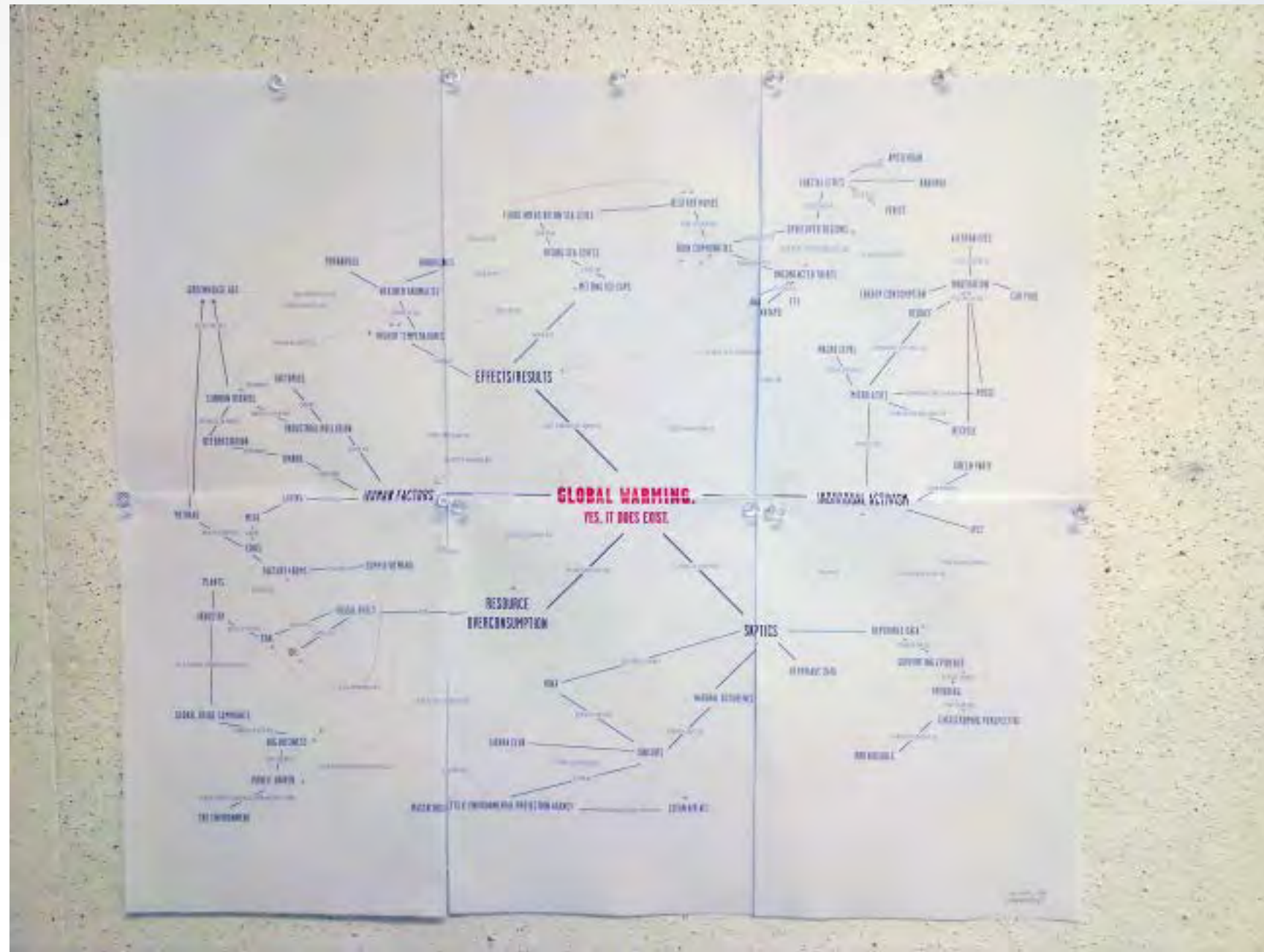# Sample Content Map: *Examining Feline "Potty Training"*

how do you know this?

(Perhaps a prototype needs to be designed and assessed to determine the validity of this, or to engage users/ audiences, or both.)

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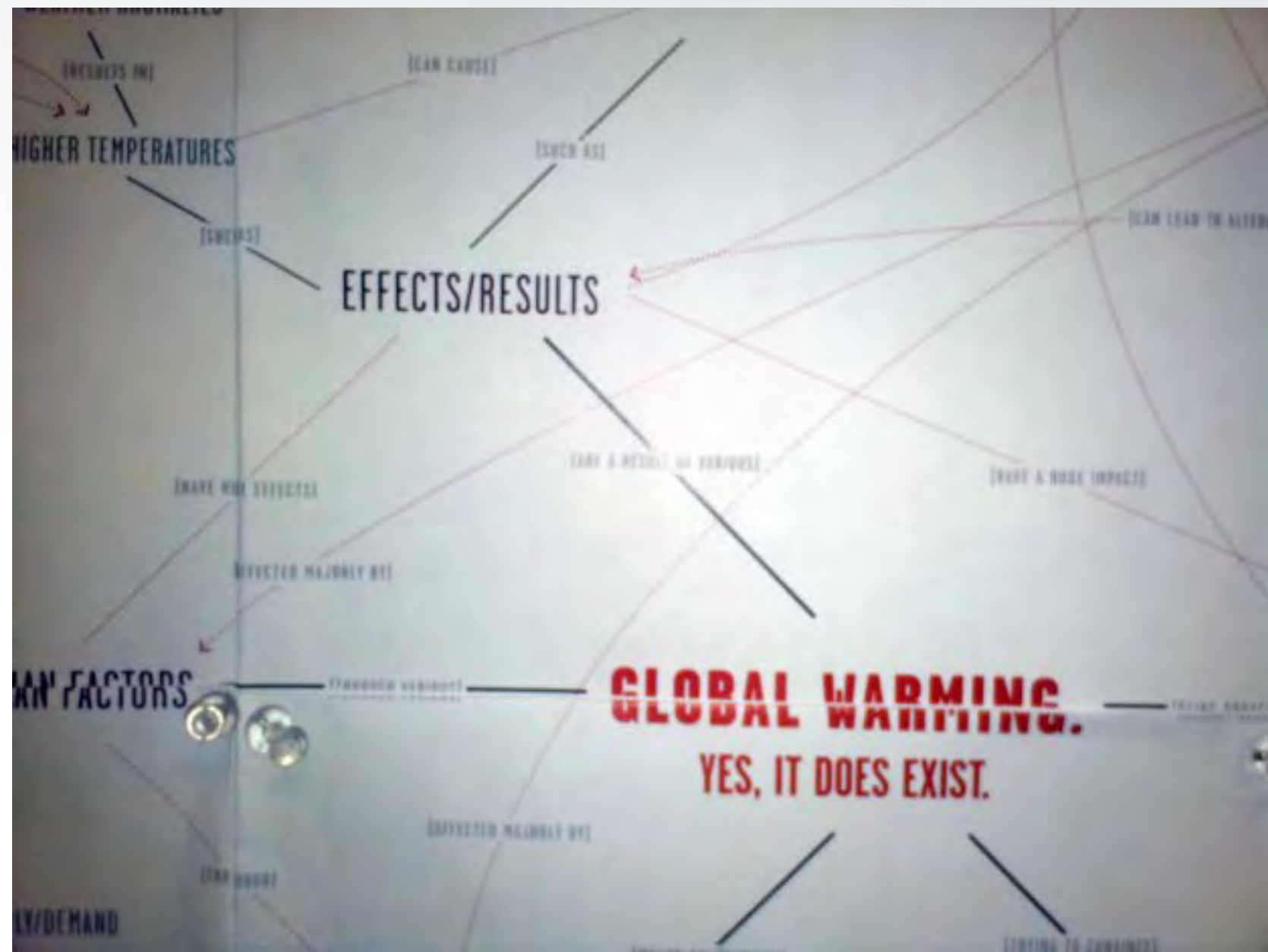College of Visual Arts and Design

Sample Content Map: *Examining Teaching Strategies Re: G-Warming*

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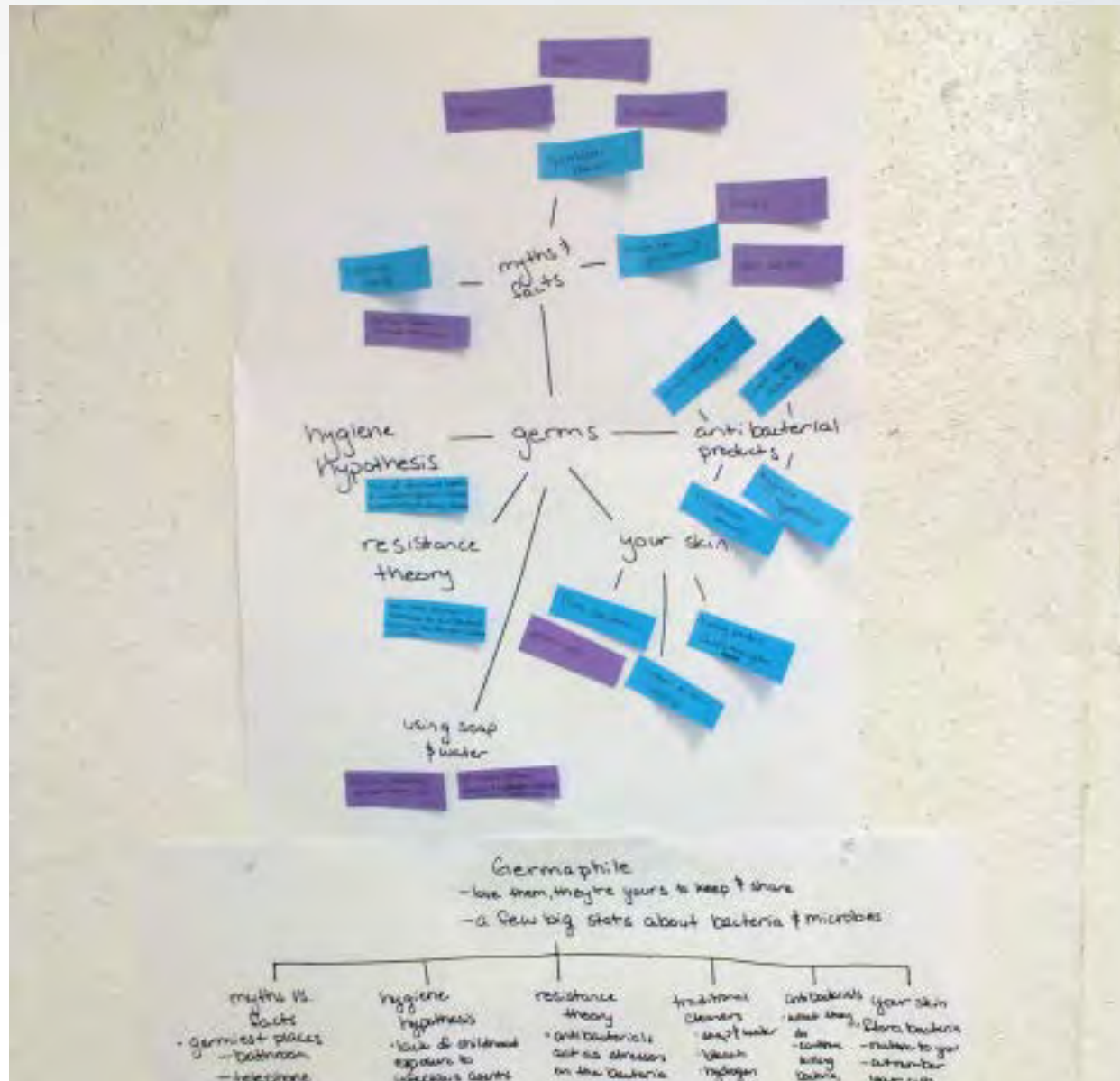College of Visual Arts and Design

Sample Content Map: *Examining Teaching Strategies Re: G-Warming*

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Sample Content Map: *Examining Approaches to Abet Stroke Prevention*

how do you know this?

(Perhaps a prototype needs to be designed and assessed to determine the validity of this, or to engage users/audiences, or both.)

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Sample Content Map: *Advocating to NOT "Over-Kill Germs"*

how do you know this?

(Perhaps a prototype needs to be designed and assessed to determine the validity of this, or to engage users/ audiences, or both.)

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Making Design Research Actually Happen

E. Ideation and Scenarios

Groupmates must "mine" their concept maps, and the processes that informed the configuration of these, to begin to suggest the development of "rough" prototypes. These should be suggested (and perhaps sketched out/built out) as a means to allow researchers and stakeholders to begin to engage in dialogue about how specific experiences, re-configurations of environments, changes in procedures or protocols, etc. might be enacted to improve a given situation.