Kai ʻOpua

MFA Thesis
Visual Communication

by
Collin Hover

Hello,

my name is Collin Hover

I am a
graduate student
in Visual
Communication

*at the University of
Texas at Arlington*

This project is a MFA

thesis

A 360 degree experience designed to be both meaningful and playful

A way to teach web design to an audience of ages 12 - 16

A website built to be accessed from anywhere

A game that
feels friendly
& intuitive but
is still full of surprises

A way to explain the
importance of efficiency
in visual communication
. . . is an extension of the foot

A game that conditions players to value efficiency when solving problems

A game that gives the player
the ability to change
the size of any object

I want to tell you why this

matters

Students are proficient in
using digital tools to create websites,
but do not understand
the concepts behind the tools

This is like knowing the answer to a math problem

but not knowing how or why

that answer is the correct one

These students are part of a very broad group, of which this project will target only a sub-section

Ages

12 – 16

of either gender

Enjoy using a computer

to get information,

but not to design information

(and may be even afraid of the latter)

do not think like a web designer or gamer,

but should have an interest in

problem solving &

role-playing new identities

Just like understanding a math problem,
you cannot solve web design problems
without first knowing
how those problems work

Trying to do so
without understanding the processes
behind web design
results in communication that is
inaccurate and dangerous
USDOE

Web designers *(just like any other creative professional)* have a mental framework they use to understand problems and create solutions

This involves a number of concerns such as:

structure,

function vs form,

& audience

(common to many designers)

This also involves special emphasis placed on values such as:

usability,
interactivity,
accessibility,
& efficiency

Usability

is walking a mile in someone's shoes

to make a friendly solution

Interactivity

is reacting to someone’s choices to bring them an engaging solution

Accessibility

is knowing that you cannot control someone’s technology, so we make a flexible solution

Efficiency

is understanding no one
has all the time in the world,
so we need a simple solution

And of all the aspects of
web design I've mentioned,

efficiency
has the clearest measure
of right and wrong

This is because we can quantitatively measure how

quickly, cleanly, and clearly

a goal is met *(p.s. this cake is great)*

This makes
efficiency a very strong candidate
for a game based learning situation

Within web design,
efficiency is minimizing the time
someone spends doing
unnecessary activities on a website

Waiting for the site to load is
by far the worst of these activities

~~How fast can you download a website?~~

(this is a terrible question)

How long will someone wait for a website to load?

(this is a better question)

The key here is
the size of the resources
the website uses
to reach its goal

The more files we need
& the bigger they are,
the longer we have to wait

We care about someone's tolerance for waiting because

if someone doesn't wait for a website to load,

the website does not exist

The difficulty for a web designer is controlling the

& size

of the files

Because it isn’t as easy as
making everything as small as possible
or using the same image 100 times

Images need to be
the right size for the layout

```
/*
Kaiopua.js
Main module, handles browser events.
*/

var KAIOPUA = (function (main) {
    var shared = main.shared = main.shared || {},
        utils = main.utils = main.utils || {},
        loader, error, game,
        lastGamma, lastBeta,
        libList = [
            "js/lib/jquery-1.6.4.min.js",
            "js/lib/RequestAnimationFrame.js",
            "js/lib/requestInterval.js",
            "js/lib/requestTimeout.js",
        ];
});
```

and code that the user never sees should be minified

(ex: left code > right code)

```
var KAIOPUA=(function(g){var b=g.
shared=g.shared||{},s=g.utils=g.
utils||{},k,p,u,r,l,t=["js/lib/jquery-
1.6.4.min.js","js/lib/RequestAnimation-
Frame.js","js/lib/requestInterval.js","js/
lib/requestTimeout.js","js/lib/signals.
min.js"];});
```

A web designer’s task
of controlling the size of resources
is mirrored in the game

Players will have the ability to

change the size of objects

in their environment *(to solve puzzles)*

The player can either make an object

larger and heavier,
or smaller and lighter

Let me show you how

this works

A web designer has been asked
to create a website for people
to research high resolution images
of rocks

Meanwhile, in the game

a giant space worm
is hungry and wants to eat a boulder,
but can’t feed itself

The web designer finds that

the images he has are so large
that they will take hours to load

& he knows not even the most patient researchers will wait that long

rock_image.psd - estimated time: 1.5 hours

However, if the web designer
can't find a solution
before the project deadline
he'll be out of a job!

In the other galaxy, our valiant player finds

a colossal boulder
but it is too heavy to move

Our game player only has
until sundown to find a solution *(or else)*

Back in our web designer's world,

he has resized his images

(so that users of his website can) download them

in seconds & still get enough detail to

give satisfying information

Thinking quickly, our game player

shrinks the boulder down into a small stone, just the right size for him to carry and still big enough to give the space worm a satisfying meal

too big

just right

too small

Both the player and the designer

have used efficient design thinking to remove barriers & create a smoothly flowing experience

In the game hero's case, his problem was

the worm's hunger needs, and how he could deliver the correct food in time

On the web designer's side, his problem was

the researcher's image needs, & how he could deliver the correct images at a big enough size to use for research, within a reasonable timeframe

Crisis averted!

Let me outline the project

scope

A successful thesis in this case would be

the solution that is both

meaningful and playful

Players participating in
a meaningful experience will
choose to change the way they think

An obvious attempt at indoctrination will be instantly rejected by the player

source: James Portnow, Daniel Floyd - Extra Credits

Players participating in

a playful experience

may be more likely

to adopt new information

source: David A. Kolb, John Dewey, Kurt Lewin, and Jean Piaget - Experiential Learning

It is suggested that a third space

is optimal for meaningful experiences

source: David Williamson Shaffer - How Computer Games Help Children Learn

A third space is defined as somewhere between

formal instruction and free play

Games are a
very strong third space

Players enjoy themselves by

internalizing & playing by the rules

source: David Williamson Shaffer - How Computer Games Help Children Learn

Two products will define this project as successful:

a written discourse

& a playable game

the writing

will explain:

the proposition that

this game will help players

solve real world web design problems

what real world web design problems exist that are difficult to solve

why these problems are difficult to solve and why it is

difficult to teach others to solve them

how this game will teach players to

better approach these problems

and as possible,

real cases of the success of the game

the Game

will be playable and include:

An animated character

images from early game development

A living world

images from early game development

A place for the character to live

and an environment to make it real

Working player movement
and 3D physics
images from early game development

Working player ability to

control the size of objects in the world

using a small lantern

Colored visuals

image of game start menu

A single puzzle that demonstrates

why efficiency is important & how to use it

images from early game development

Limited game music

and environment sound effects

Speaking of the

visual style

The visual experience of the game
has a heavy influence on the attitude
of the player

The character and environment designs are all made to

communicate
as much as possible
with as little as necessary

They are also designed to be

friendly and playful,

so as to be approachable

User Ortho
and
strange and altruistic,
so as to be interesting
(26) Cube.004

Tangential

learning and gaming

Tangential learning happens when

a reference is made in a game to something that may also exist outside the game world, and the player chooses to research it further on his/her own

to give you an example,

the game's name is my middle name,

Kai 'Opua

or "clouds over the ocean" in Hawaiian

Tangential learning is natural information transfer
in that a player is not required to learn,
but given the chance to learn
of their own choosing

For the same reasons, tangential learning
cannot be used for information that
a player is expected to learn

~~Why bother with tangential learning?~~

(this is a terrible question)

What can we do with tangential learning?

(this is a better question)

Asking what we can do with it is relevant because

all visual communication can use tangential learning naturally

or in other words, the opportunity is built in

Hawai'i

and tangential learning

Because I want to create

a playful and interesting alien world

I have chosen to base the setting on Hawai’i and Hawaiian culture

I want the setting

to be different from reality
but believable in its structure

Hawai’i and Hawaiian culture

is mysterious, attractive,

and is relatively different

from both western and eastern culture

Because I grew up in Hawai'i,

I have a personal connection to the location and culture

So the use of tangential learning
to teach about Hawai'i
is out of respect to the culture
and its fit as an alien location

This is why

all setting, character, and story elements are based on or draw from Hawai'i and Hawaiian culture

TLDR

so let me sum up

Ultimately, this game is intended for

use universally as

a design educational experience

at the 6-12th grade levels

As well as an opportunity to

reinforce design as a resource

for developing innovation

With a

primary goal of teaching students

how to be more efficient designers,

and a tangential goal of showing them a new culture

thank you

for listening (or reading)