

HACK YOUR SCHOOL

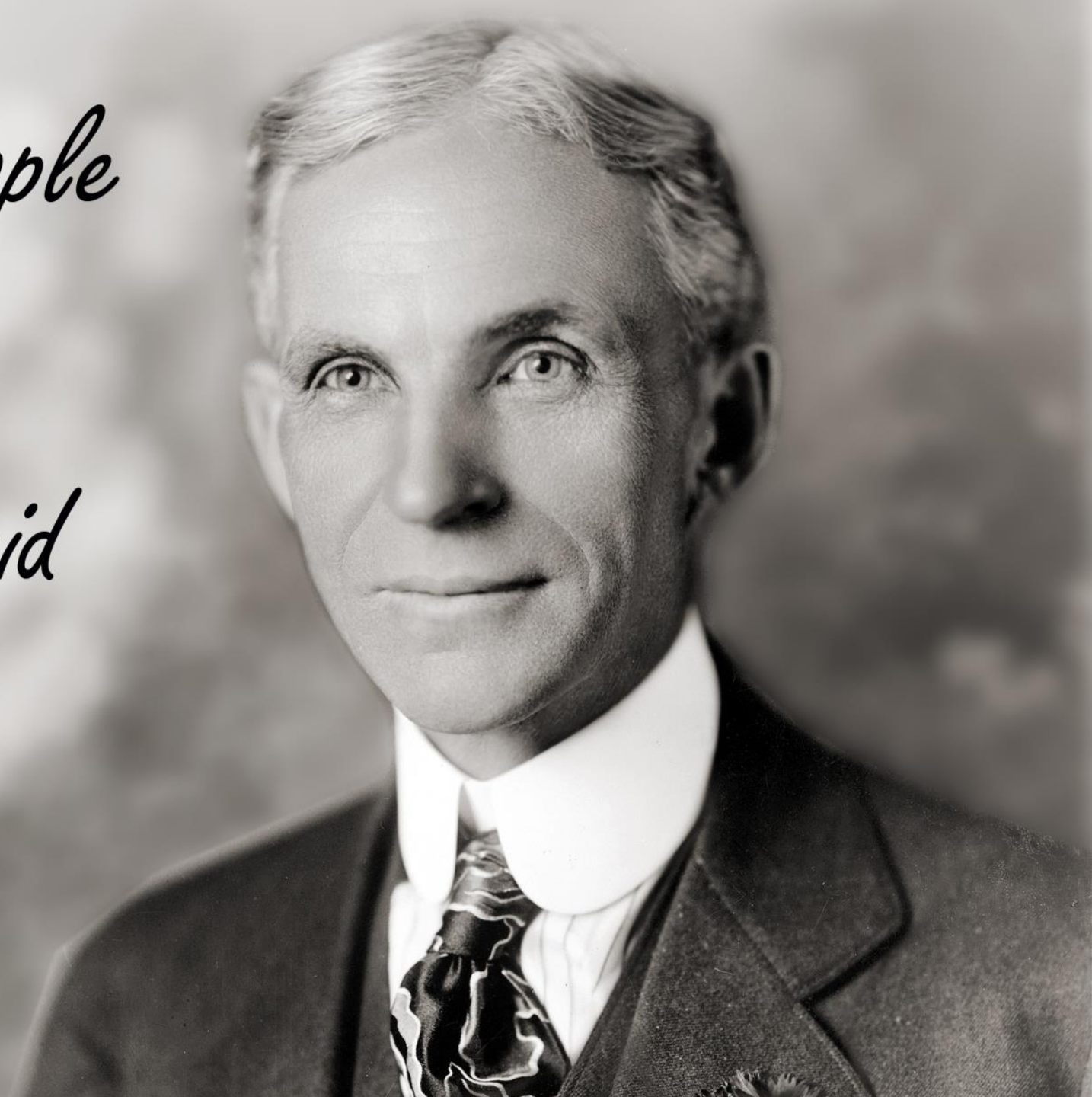
An innovator's guide to future-focused facilities

think

BIG
BUILD
INNOVATE
GROW

*"If I had asked people
what they wanted,
they would have said
faster horses."*

- Henry Ford





Damien Schlitt, AIA, LEED AP
Associate
BLDD Architects



Shannon Cheek
Superintendent
CUSD #305

WHO
WE ARE



Agenda



A different approach

Real results

How to “HACK”

DIFFERENT APPROACH

think

BIG

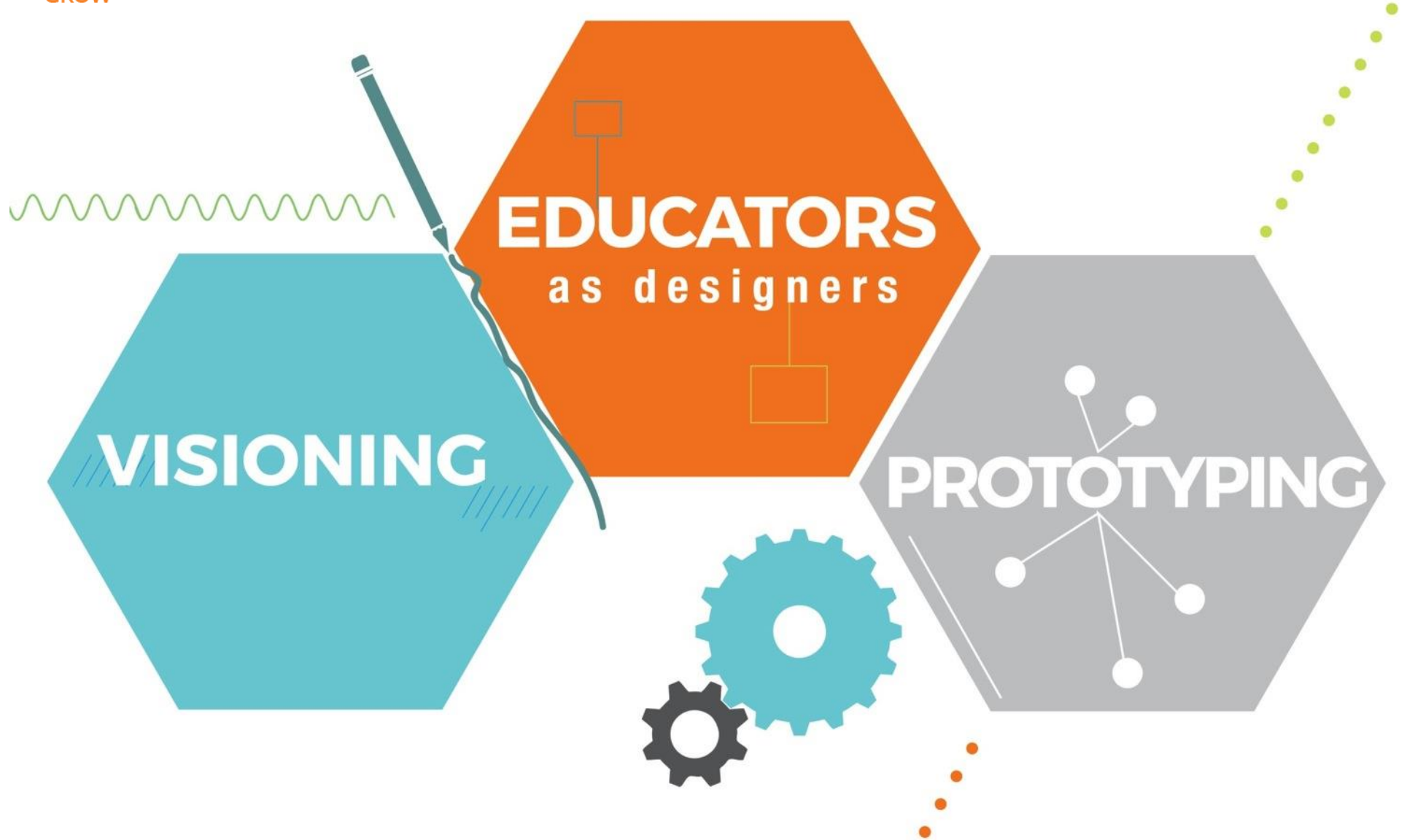
BUILD
INNOVATE
GROW



traditional planning **fails**

- **Visits to new schools**
 - Shopping for cars
 - Bigger better versions of old models
- **Interviews**
 - Limited value of input
 - Lost in translation
- **Charrettes**
 - Limited time to develop expectations
 - Chasm between what users **THINK** they want, and **LEARNING** what they want through experience
- **Admin led**
 - Top down → no “buy in”
 - Lost opportunities

think **BIG**
BUILD
INNOVATE
GROW



SO, WHAT EXACTLY IS **THINK BIG?**

We work with stakeholders to harness the **power of design thinking to uncover BIG ideas** and new approaches for modern learning, with a focus on authentic user-participation. Together, we quickly explore possibilities and take them for a test drive, before construction.

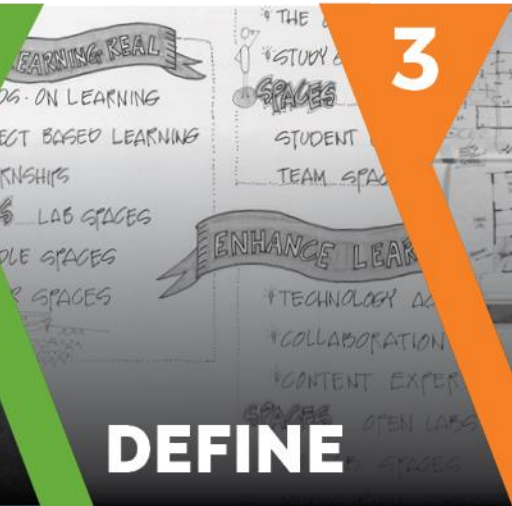
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EMPATHIZE

- Classroom observations
- Staff surveys
- Exemplar visits

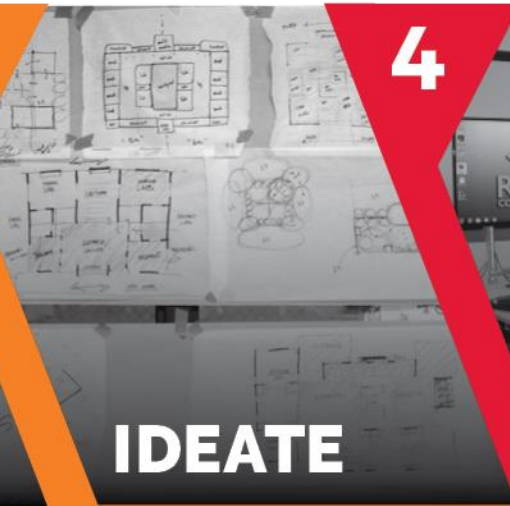
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DEFINE

- Collect common themes
- Prioritize needs
- State the problem

3



IDEATE

- Involve teachers, students, and designers
- Value diverse viewpoints

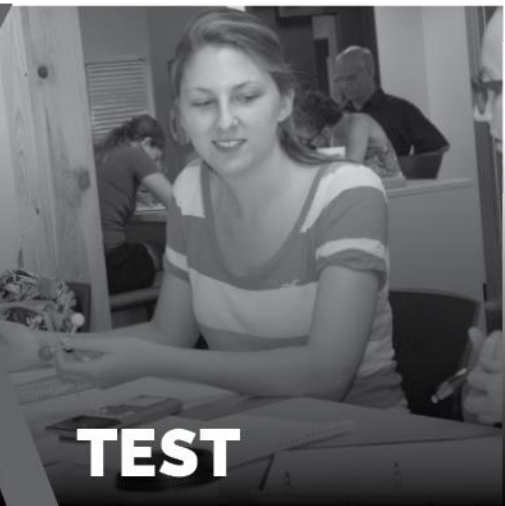
4



PROTOTYPE

- Built with our "kit of parts"
- Stage with furniture and technology

5



TEST

- Hold classes in prototype
- Let students and educators experiment and re-arrange
- Gather feedback

Bringing new ideas to life is an essential part of what we do. The first versions are usually rough. They're early proofs of concepts, ways of helping us explore, learn, and think. Usually, they're far from pretty, and they may never work. They're prototypes — not finished products.

— IDEO





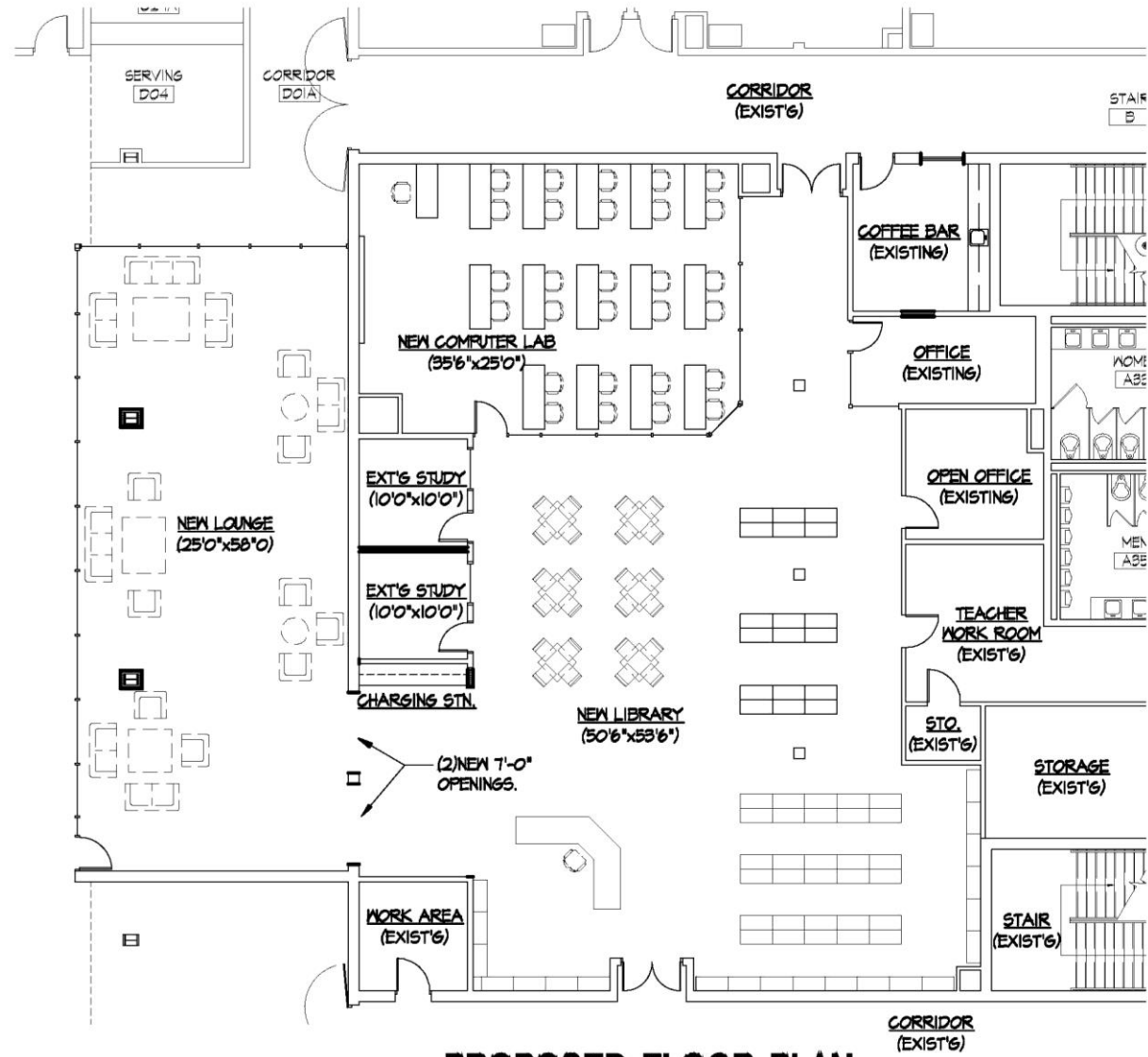
SO, WHAT
EXACTLY IS
HACKING?



MAHOMET SEYMOUR HIGH SCHOOL

- Needed additional functional space
- Create a heart for the campus
- Improve stagnant atmosphere
- Niche.Com ranking facilities score low

MAHOMET SEYMOUR HIGH SCHOOL



PROPOSED FLOOR PLAN

SCALE: 3/32" = 1'-0"

Initial Solution
(top-down)



EMPATHIZE

Understand the users'
perspectives, challenges
and aspirations

**FEEDBACK
WANTED!**
Help us re-imagine
RCC's learning spaces.

think **BIG** 



**hidden, dark,
uninspired space**



We only come
here to print.

“ Interrogation rooms



Crowded cord jungle



EMPATHIZE

- Classroom observations
- Staff and student discussions
- Exemplar tours and discussions with other teachers



GRAFFITI MAP

SECTION B

SECTION E

SECTION C

COMMONS
9440SF

LIBRARY
3300SF

1: empathize

Student Space ("Student Center Vibe")
Community Use
KID FRIENDLY SAFE
MAKERSPACE!
uninviting dingy
no natural lighting
space is flexible for large group use
TRANSITIONAL SPACE
Handwritten notes in green and red ink.

Med. prod. space don't close the lib.
lack of collaborative ability
Computer "tab" area too packed together
Sanctuary
PRINT DOCUMENTS
Sterile environment
no color!
DO NOT SACRIFICE DESKTOP
I don't use this space
Handwritten notes in red and green ink.

MORE SPACE

"LIBRARY"





DEFINE

Describe the critical aspects of a successful solution

HOW CAN WE
DESIGN SPACE

CREATE MY FUTURE

SPACES CO-WORKING SPACE

INCUBATOR SPACE

VIDEO CONFERENCING

ENGAGE STUDENTS

BUILD COMMUNITY

THE COLLEGE EXPERIENCE

STUDY GROUPS, ATHLETICS

SPACES CAFE

STUDENT UNION

TEAM SPACES

SPACES LAB SPACES

LUDDITE SPACES

ENHANCE LEARNING

IMAGINE THE
POSSIBILITIES TO

FIND MY PASSION

THINK BIG

MAKE LEARNING REAL

WHO

STUDENTS, TEACHERS
COMMUNITY, ARCHITECTS

WHAT

DEVELOP LEARNING
SPACE PROTOTYPES

WHY

TO REINVENT OUR
LEARNING ENVIRONMENTS



DEFINE

- Collect common themes
- Prioritize needs
- State the problem

Varied sized spaces for varied activities

A flow of acoustics/privacy

Destination space with MSHS identity

Technology driven

A resource space



IDEATE

Explore every idea,
generating a wide range
of potential solutions

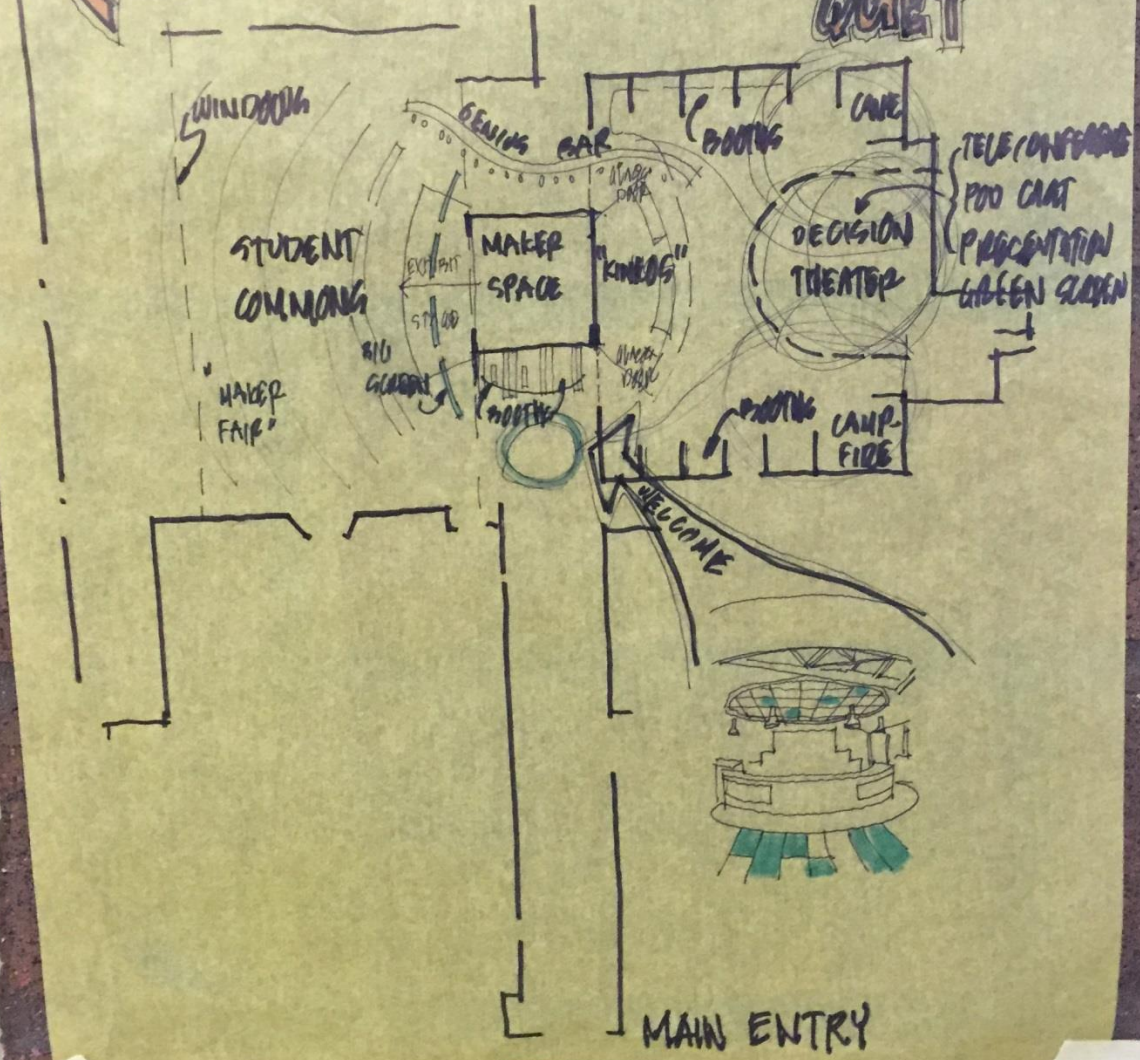
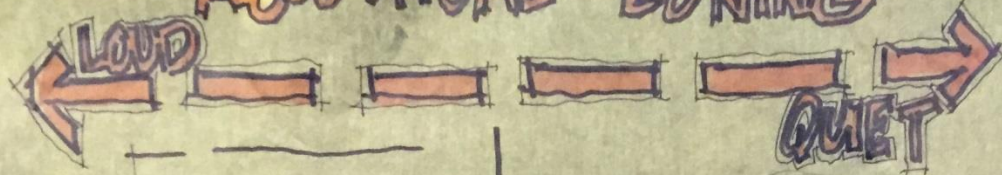


IDEATE

- Involve teachers, students and designers
- Value diverse viewpoints



ACOUSTICAL ZONING



Books/
Quiet



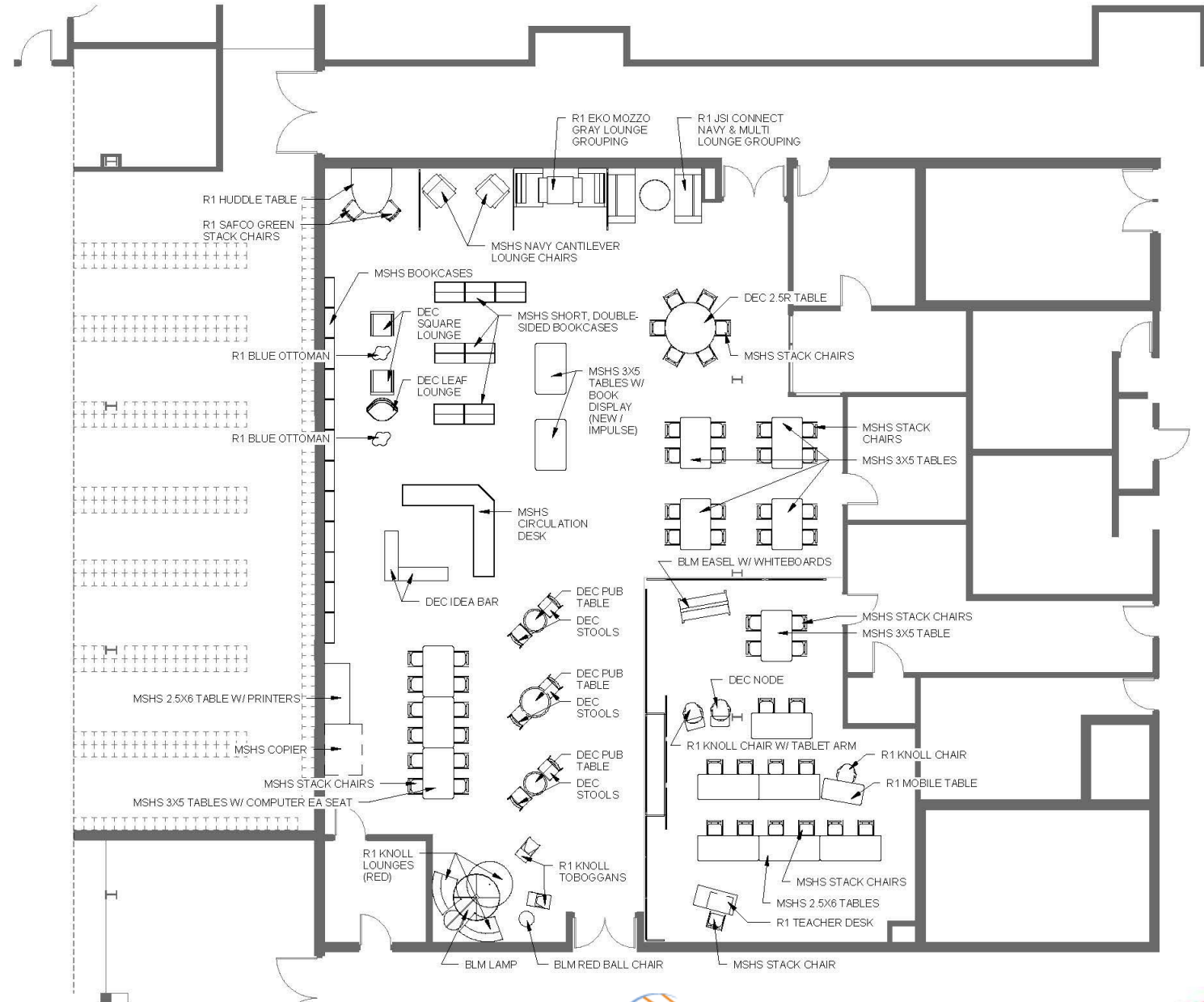
PROTOTYPE

Build a quick
approximation of the
preferred plan



THE HACK

- Built with "kit of parts"
- Try various layouts, furniture and technology



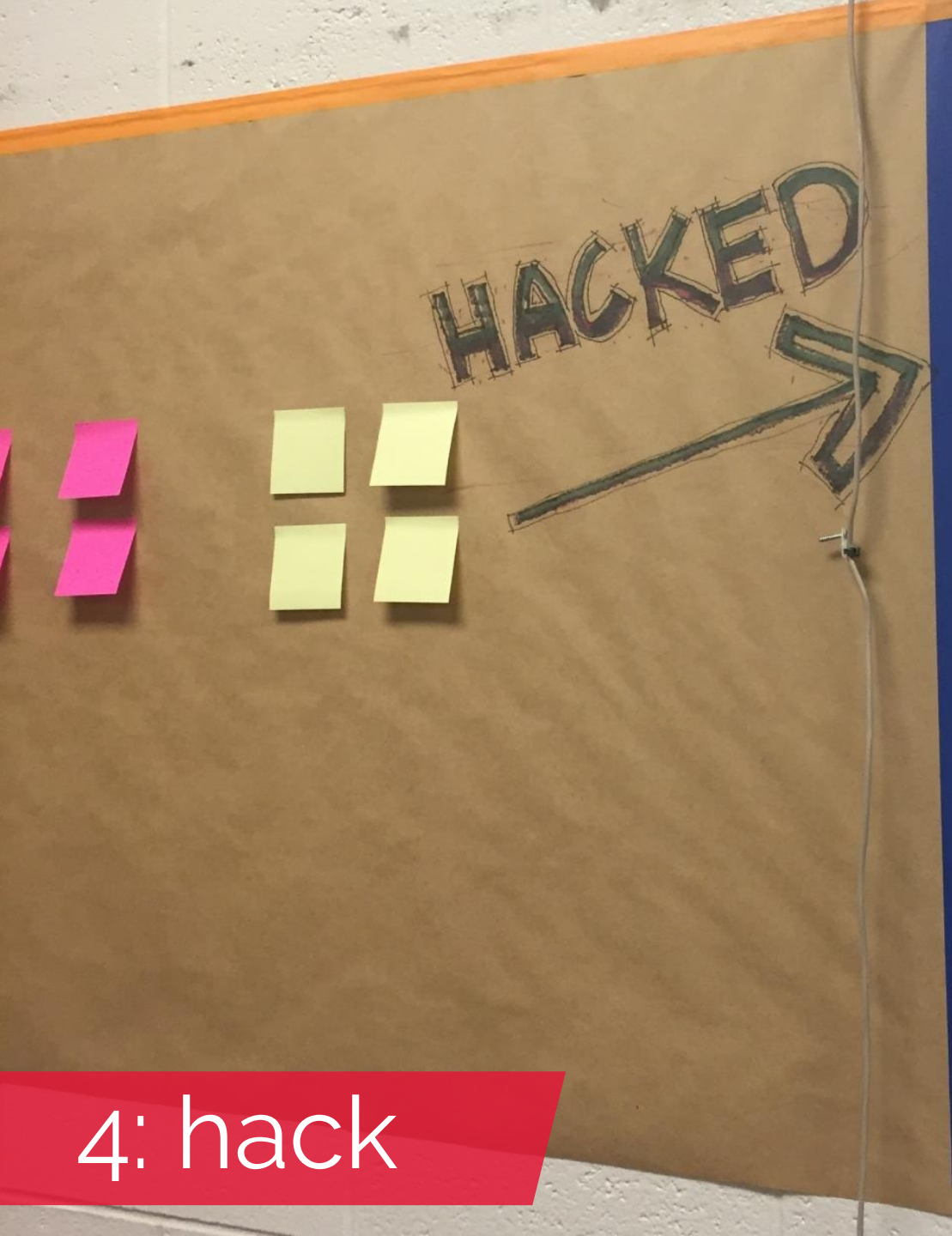
Zdi.

Resourceone
INTERIOR SOLUTIONS & DESIGN

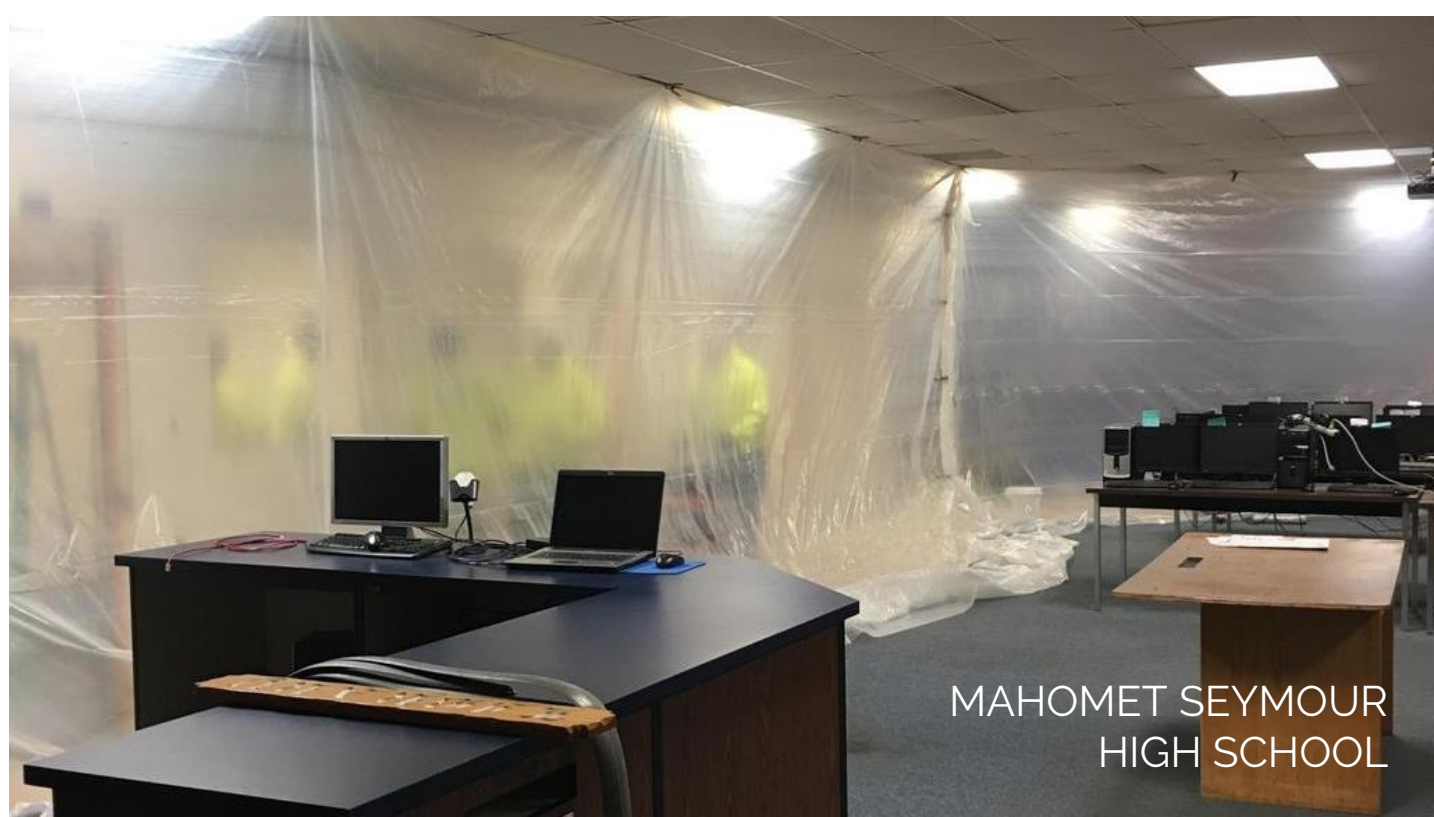


4: hack





4: hack



MAHOMET SEYMOUR
HIGH SCHOOL

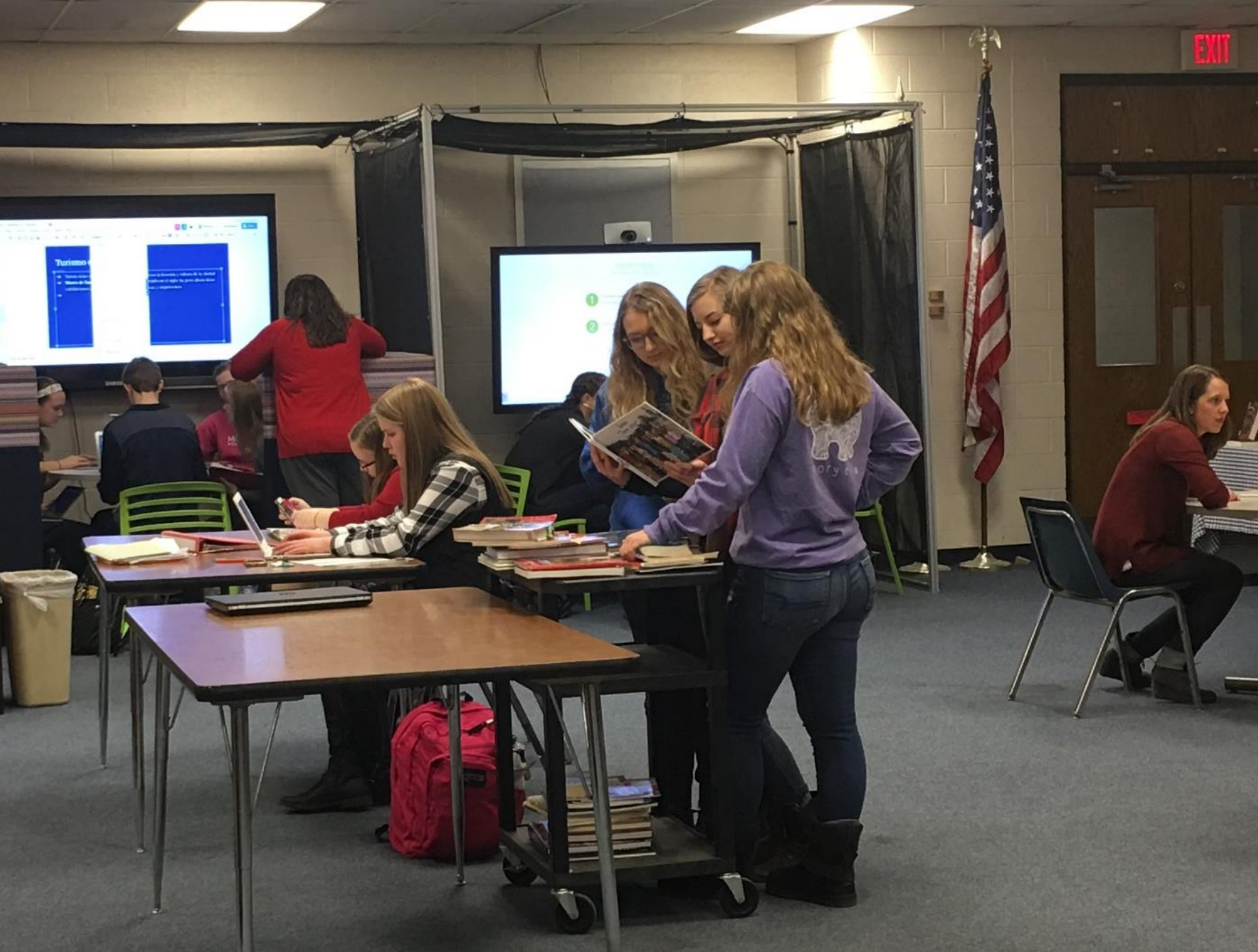
4: hack





TEST

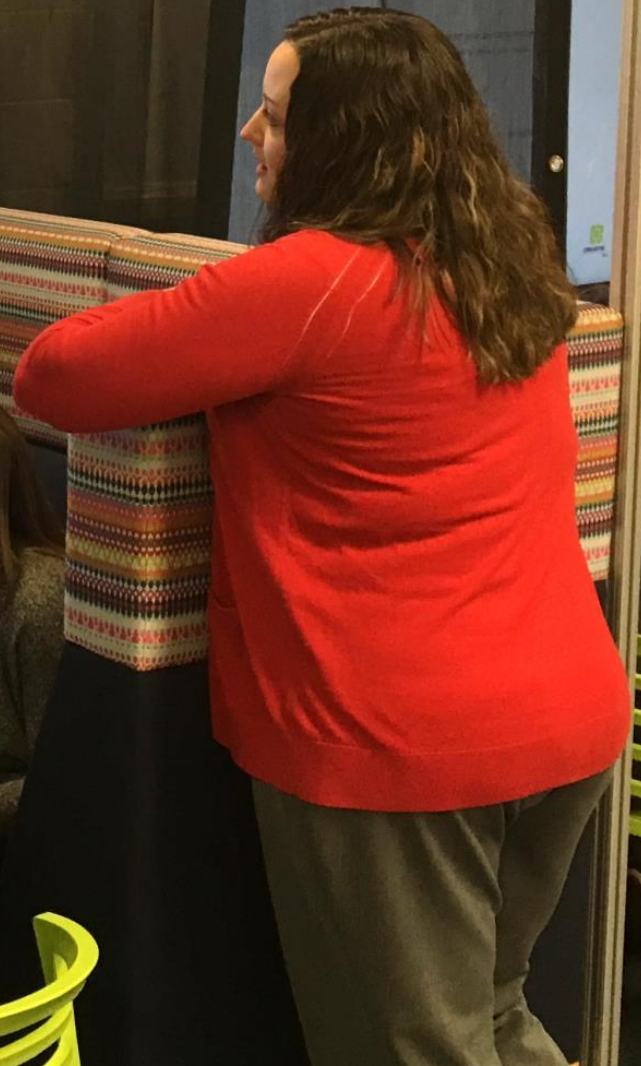
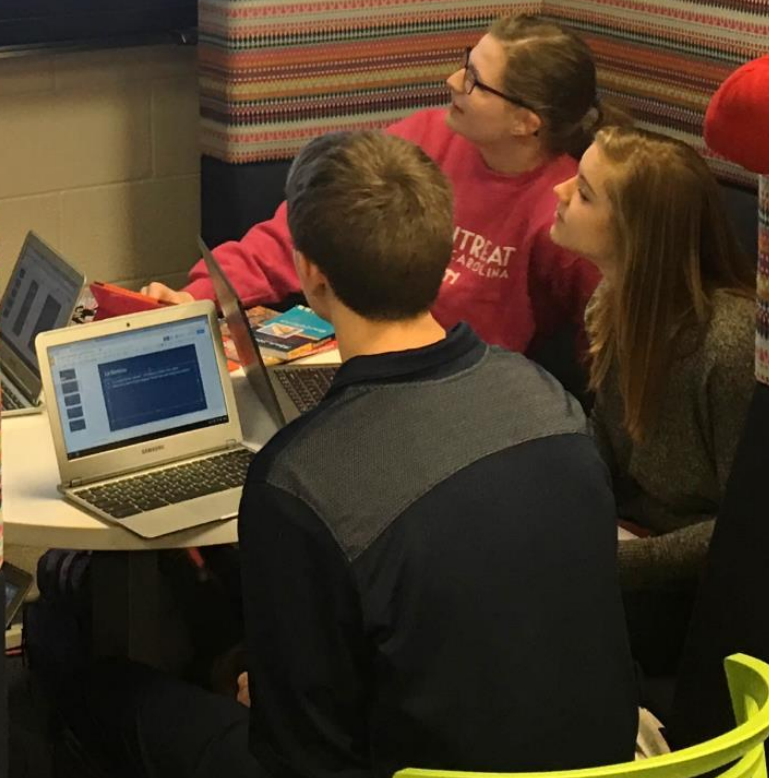
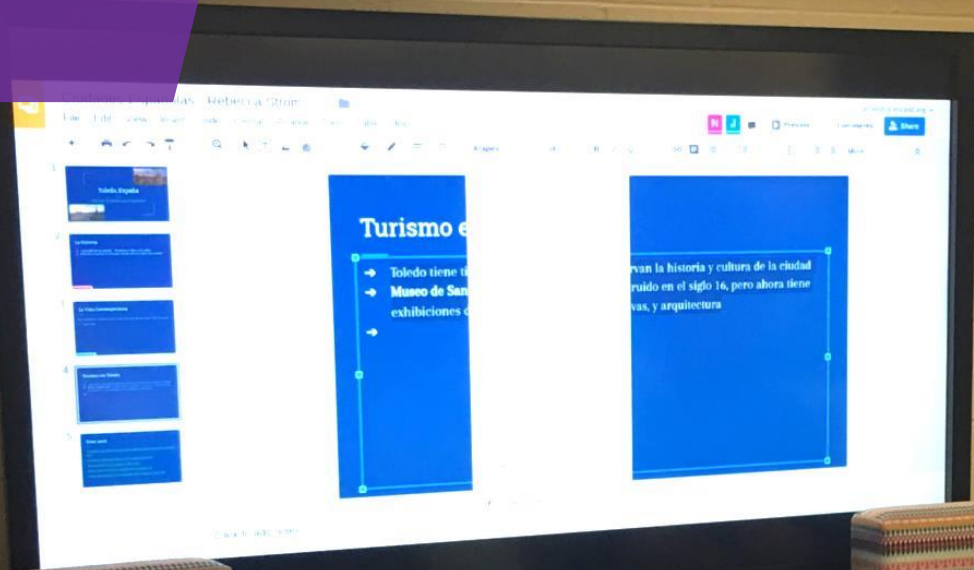
Understand what works
and what doesn't through
authentic user feedback



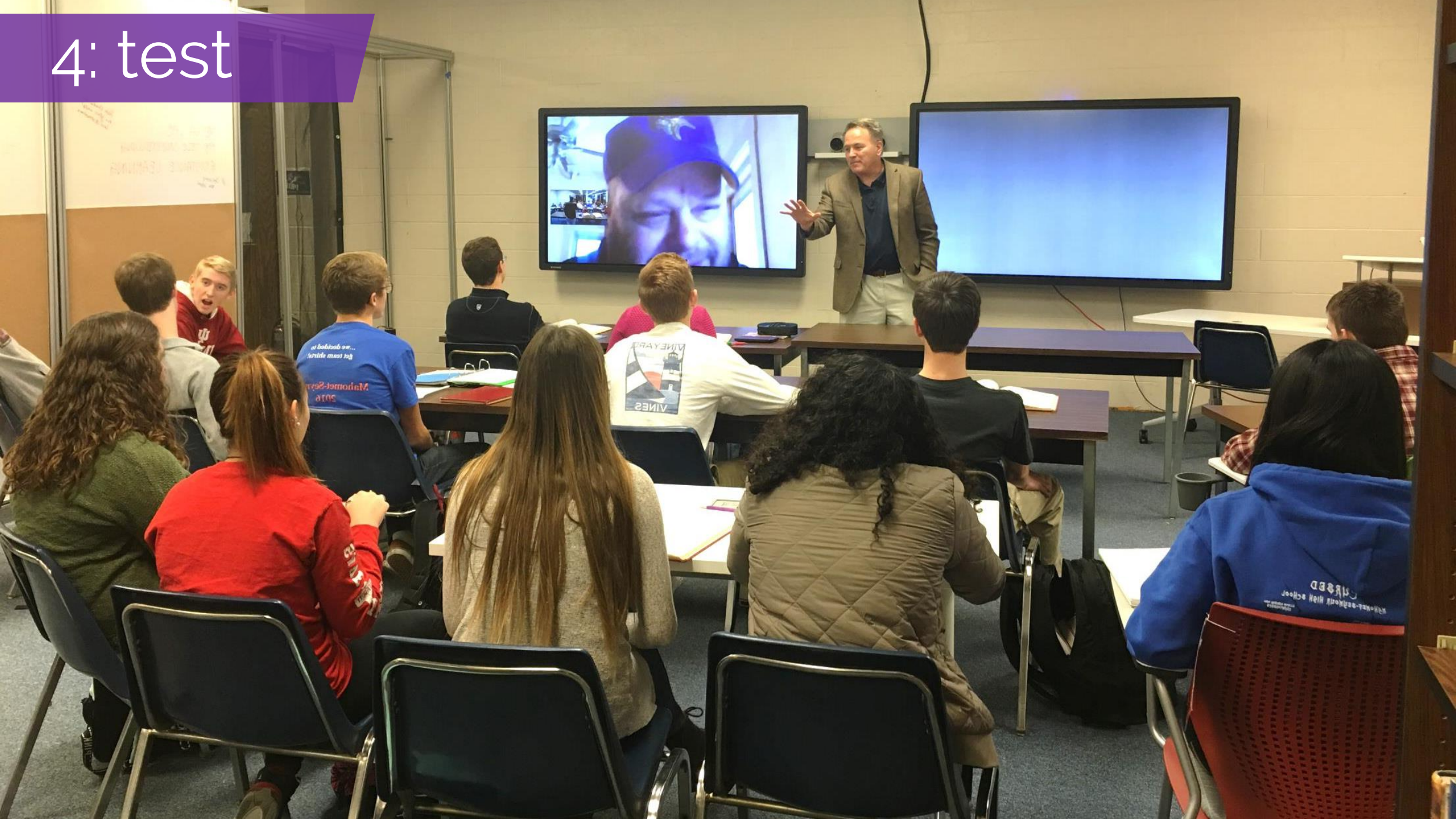
TEST

- Hold classes in hacked space
- Let students and teachers experiment and rearrange
- Gather feedback

4: test



4: test



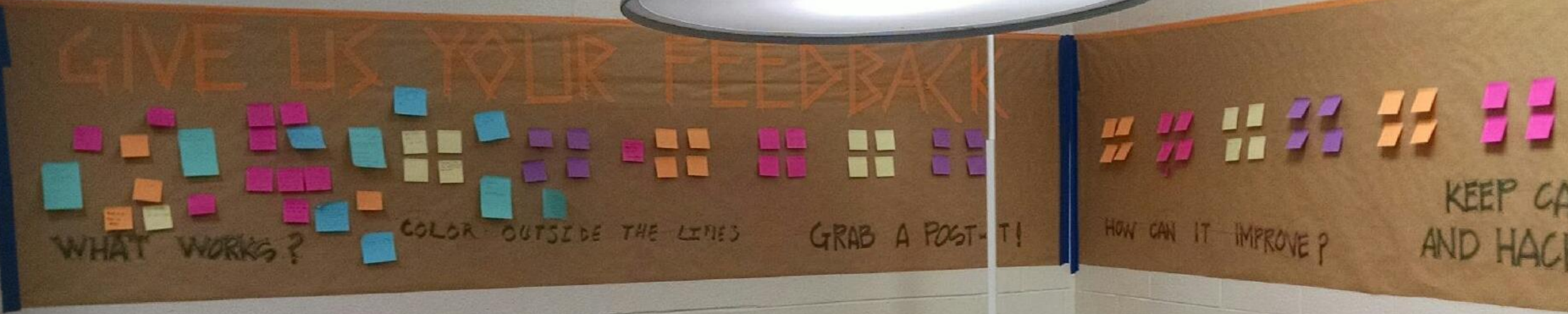
4: test



4: test



4: test



emphasize
a great idea!

I think
it's better
to be better.

NEW
BOOK
SHELVES

I like the opening
of it & feel it is
a good demonstration
of what the library
should be

to keep thing
is going to get
something!

Giant lamp
= UFO?
Magnifying
glass?

I don't think
all this is necessary

Dab
worthy

This library
is totally
uncooked

RAW!!!

KEEP CALM AND HACK ON

This library
is
LIT

- opening up the wall to
community is good idea
- nice looking observations
- like someone read is
unimpressive

More
Books

fantasy
closets



What we learned from the **“HACK”**

- Students are surprisingly practical!
- Students are as thoughtful as adults
- The process transformed both students' and teachers' existing perceptions of the purpose of the space
- Experiencing the prototype allowed for a rapid adoption of a more creative solution.
- Choice and flexibility were key components/assets to a successful design

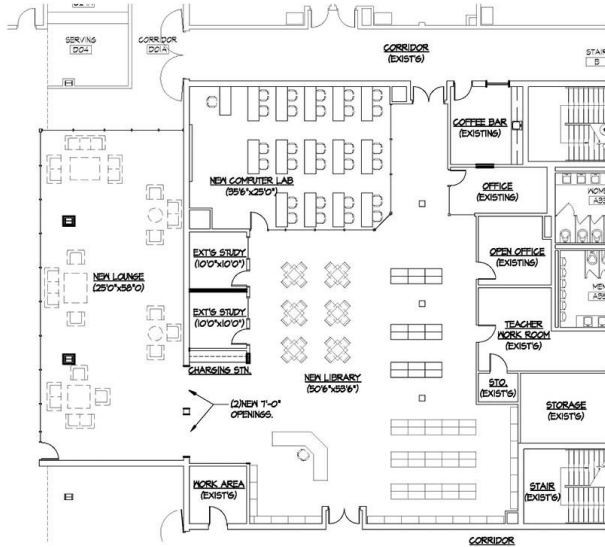
real RESULTS

think

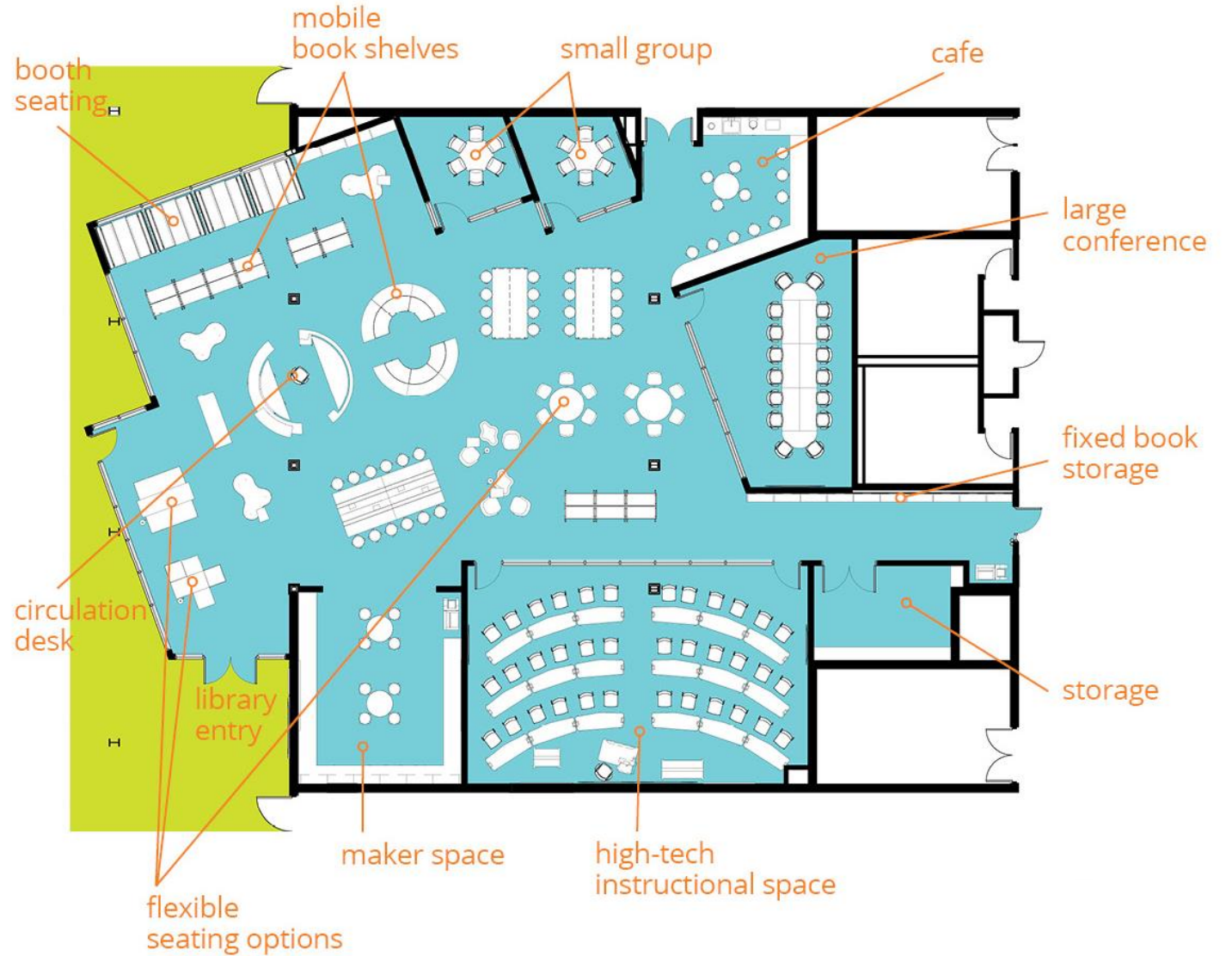
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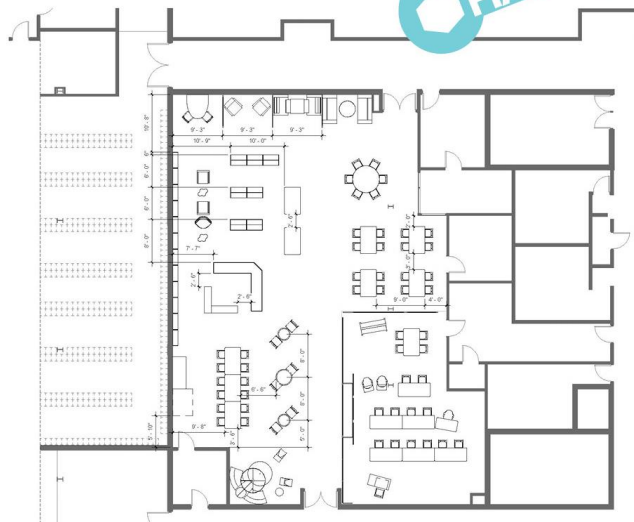
previously proposed library floor plan



after: final library floor plan



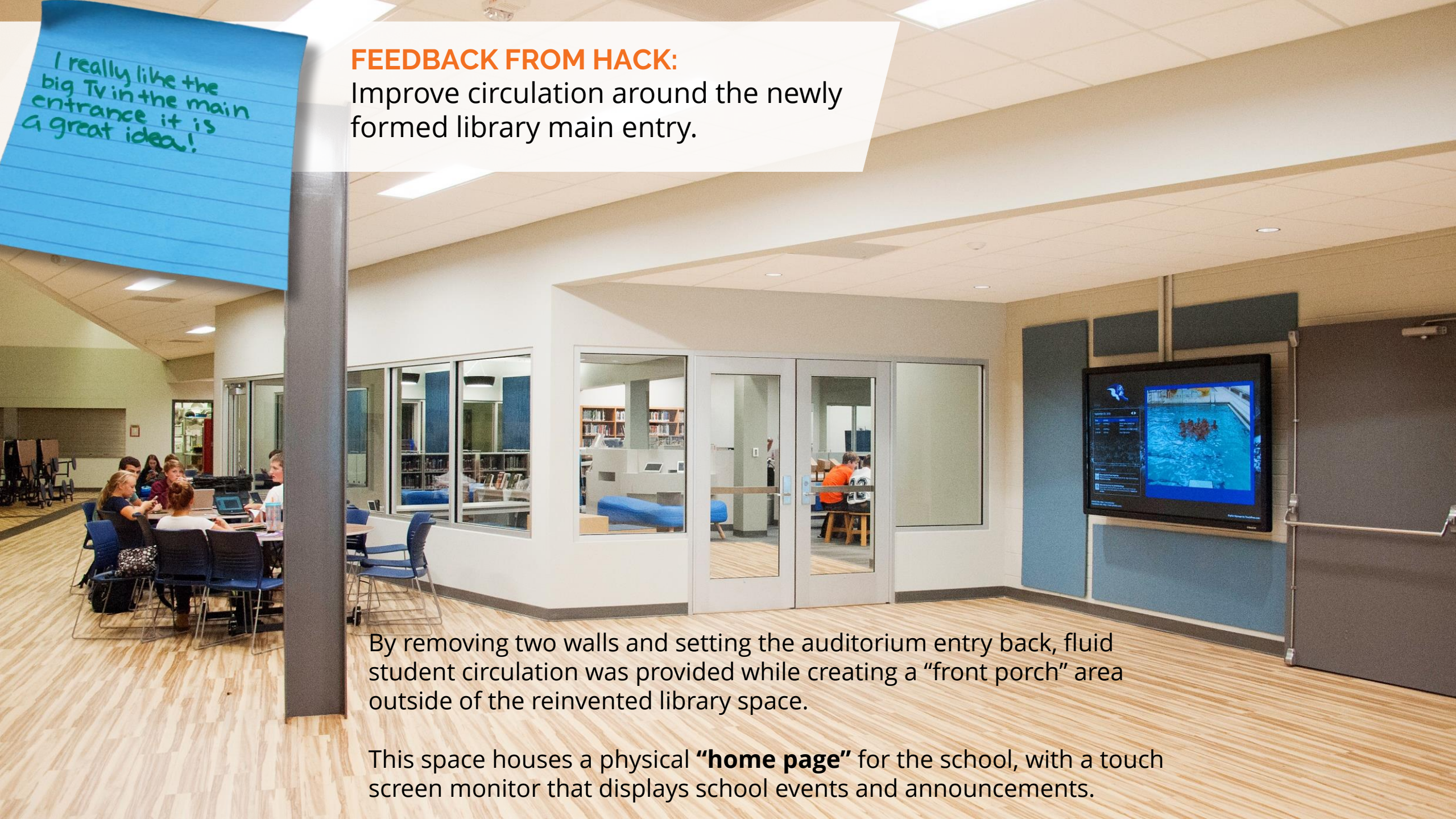
our prototype "hack" library floor plan



I really like the big TV in the main entrance it is a great idea!

FEEDBACK FROM HACK:

Improve circulation around the newly formed library main entry.



By removing two walls and setting the auditorium entry back, fluid student circulation was provided while creating a “front porch” area outside of the reinvented library space.

This space houses a physical “**home page**” for the school, with a touch screen monitor that displays school events and announcements.



Love it
so much!
especially
booths and
tables!


Student and faculty **FEEDBACK** from the tested prototype was **incorporated into the final design.**

MAHOMET SEYMOUR
HIGH SCHOOL



Fixed book stacks which limited the use of the space were replaced with **MOVABLE** and **RECONFIGURABLE** bookcases.

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HIGH SCHOOL

A photograph of a library or study area. In the foreground, a young man with short brown hair, wearing a grey t-shirt with an orange and blue logo, is sitting and reading a book. Behind him, several other students are seated at tables, some writing in notebooks. In the background, there are bookshelves filled with books. A sign on the left side of the image reads: "LOTS of places to charge phones or other electronics. *Plugs in the tables".

LOTS of places
to charge phones
or other electronics.
*Plugs in the
tables

Ensuring that power was dispersed throughout the space allowed students to utilize the entire space, **CREATING A HUB**

MAHOMET SEYMOUR
HIGH SCHOOL



add white boards
somewhere in
the little conference
room things
so we can use
them to work
together on
things





Variety of furniture and seating allows for **FLEXIBILITY** for individual and group work.

I like the study booths and how open the space is. The technology is awesome. There should be a quiet place to go to as well



MAHOMET SEYMOUR HIGH SCHOOL



EXIT

MAHOMET SEYMOUR
HIGH SCHOOL



MAHOMET SEYMOUR
HIGH SCHOOL



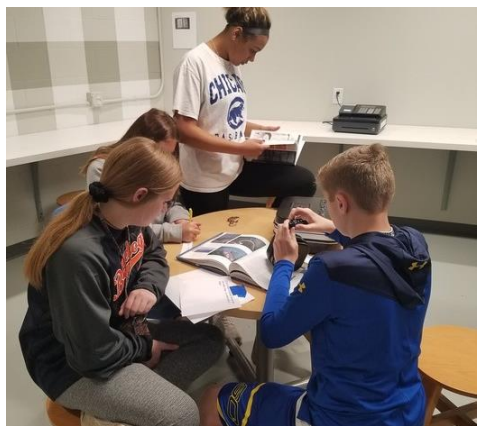
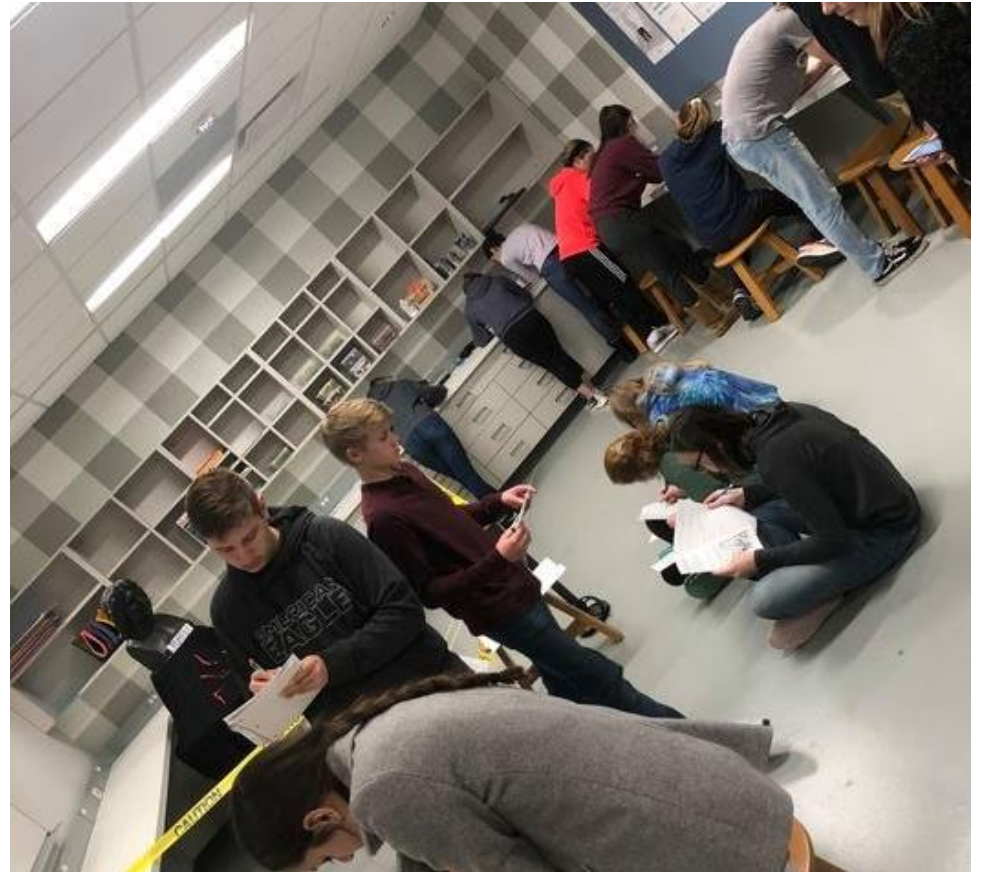
MAHOMET SEYMOUR
HIGH SCHOOL



MAHOMET SEYMOUR
HIGH SCHOOL



MAHOMET SEYMOUR
HIGH SCHOOL





project **observations**

- Dramatically increased utilization of the space.
- Created a social hub/destination. A new "heart" for the campus.
- Non-traditional furnishings may be the most appealing to students.
- By insuring that power is dispersed throughout the space, allowed students to utilize the entire space.
- Use of space by curricular instructors has increased.
- Students WANT to be in the space.

how to “HACK”

think

BIG

BUILD
INNOVATE
GROW

How to “HACK”



Partial
rough walls



Stage with
furniture



Stage with
technology



Create feedback
opportunities

prototyping PLAN

DETERMINE LENGTH OF TIME FOR PROTOTYPING

2-3 days
3-4 weeks
months
semester
school year

EXPLORE ALTERNATIVE PROTOTYPING STRATEGIES

Virtual Reality Models
"Hacking" existing space for use as a prototype
Offsite warehouse as prototype location.

ESTABLISH STUDENT EDUCATION COMPONENTS

Education
Engagement
Ownership

DETERMINE SYNERGY WITH CURRICULUM

Identify programs that will use prototype spaces and customize as desired.
Assist administration with communication to staff

DETERMINE PROTOTYPING CONSTRUCTION CONVENTION

Determine level of "finish"
• "crude or rough" to "finished construction"
Determine major structural elements and prototyping conventions
Determine staging required

DETERMINE WORKFORCE NEEDED

Contractors (if any)
Architect as installer
District staff

OBTAIN VENDOR COMMITMENT

Furnishings Vendors
Technology Providers
Finish Vendors and materials

ESTABLISH PROTOTYPE BUDGET, SCHEDULE, AND REGULATORY REQUIREMENTS

Prototype materials: architect furnished vs. purchased
Furnishings: staging provided vs. purchased
Technology: vendor provided vs. purchased
Determine code requirements and submittals
Create logistics plan: pre-prototype work, contractor modification of existing construction, prototype installation, testing duration, tear down and new prototype installation

ESTABLISH EVIDENCE BASED DESIGN PROTOCOL

Define evidence based design goals and objectives
Find sources of relevant evidence
Critically interpret relevant evidence from:
• stakeholder interviews
• learning activity observations
• exemplar tours
Create and innovate (evidence based design concepts)
Develop a hypothesis
Collect baseline performance measures
Monitor implementation
Measure post occupancy performance results

prototyping

KIT OF PARTS



WALLS - FRAMING

80/20 extruded aluminum framing
2x4 wood framing
Wood storage shelf framing

WALLS - SURFACE

Black mesh tarps
Plastic sheeting
Melamine panel boards
Fabric



LIGHTING

Clip on shop lights
Mini spotlights
Sample lighting from vendor partners



FURNITURE

Vendor partner provided
Architect provided

- Wobble stools
- Portable tables
- Stacking chairs

Pilot program purchases
Owner provided existing
Boxes and temporary improvised pieces



FLOORING

Carpet tile
Broadloom carpet with professional installation
Paints or coatings

EQUIPMENT

Mobile Markerboards
Melamine panel boards
Portable shelving
Portable work tables
Portable storage units
Laminate countertop with support brackets

TECHNOLOGY

Vendor partner provided
Owner provided

LABOR

Architect
Students
Local volunteers
District staff
Contractors

FEEDBACK

Markerboards
posters
Butcher paper
Post it notes
QR code / Google Survey
Website
Survey monkey

INFRASTRUCTURE

Power

- Extension cords
- Contractor
- District staff

Data

- Contractor
- District staff

OTHER

Bungee cords
Duct tape
Zip ties
Power tools
Hand tools
Painters tape
Paint / Marker Board paint

HACK YOUR SCHOOL

An innovator's guide to future-focused facilities

thank you!

think

BIG
BUILD
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