ALLEGRA W. SMITH | PURDUE UNIVERSITY

DESIGN, ACCESS, AND EQUITY

teaching, research, and administrative philosophies

ALLEGRA W. SMITH

- BA Professional Writing, Gender Studies, Michigan State University
- MA, Digital Rhetoric & Professional Writing, Michigan State University
- PhD, Rhetoric & Composition (ABD), Purdue University

Teacher, researcher, advocate in professional writing and the design of communication

AARP Tax-Aide **volunteer** invested in community engagement for older adults and intergenerational learning

TEACHER, RESEARCHER, ADMINISTRATOR

TEACHER

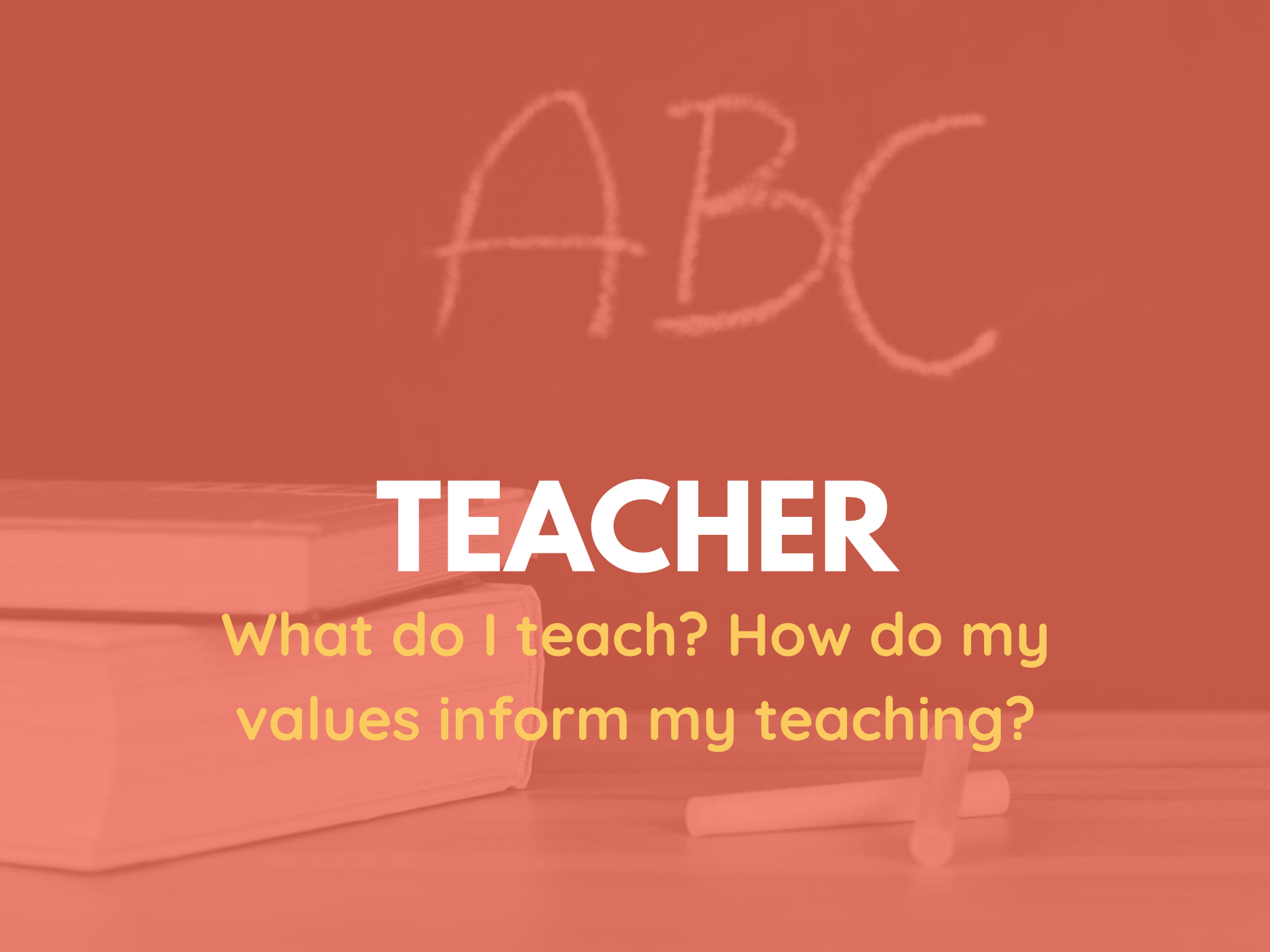
Technical & professional writing; multimodal composing; nonprofit advocacy communication

RESEARCHER

User experience (UX); (accessible) design of communication; online writing instruction & curriculum; age studies

ADMINISTRATOR

Online & F2F writing programs; curriculum development & design; teaching of teachers; building capacity & sustainability



TEACHER

What do I teach? How do my values inform my teaching?

MY TEACHING VALUES

NETWORKED EXPERTISE

AUTONOMY & SELF-DIRECTION

PRACTICE THROUGH PLAY

BUT ALLEGRA

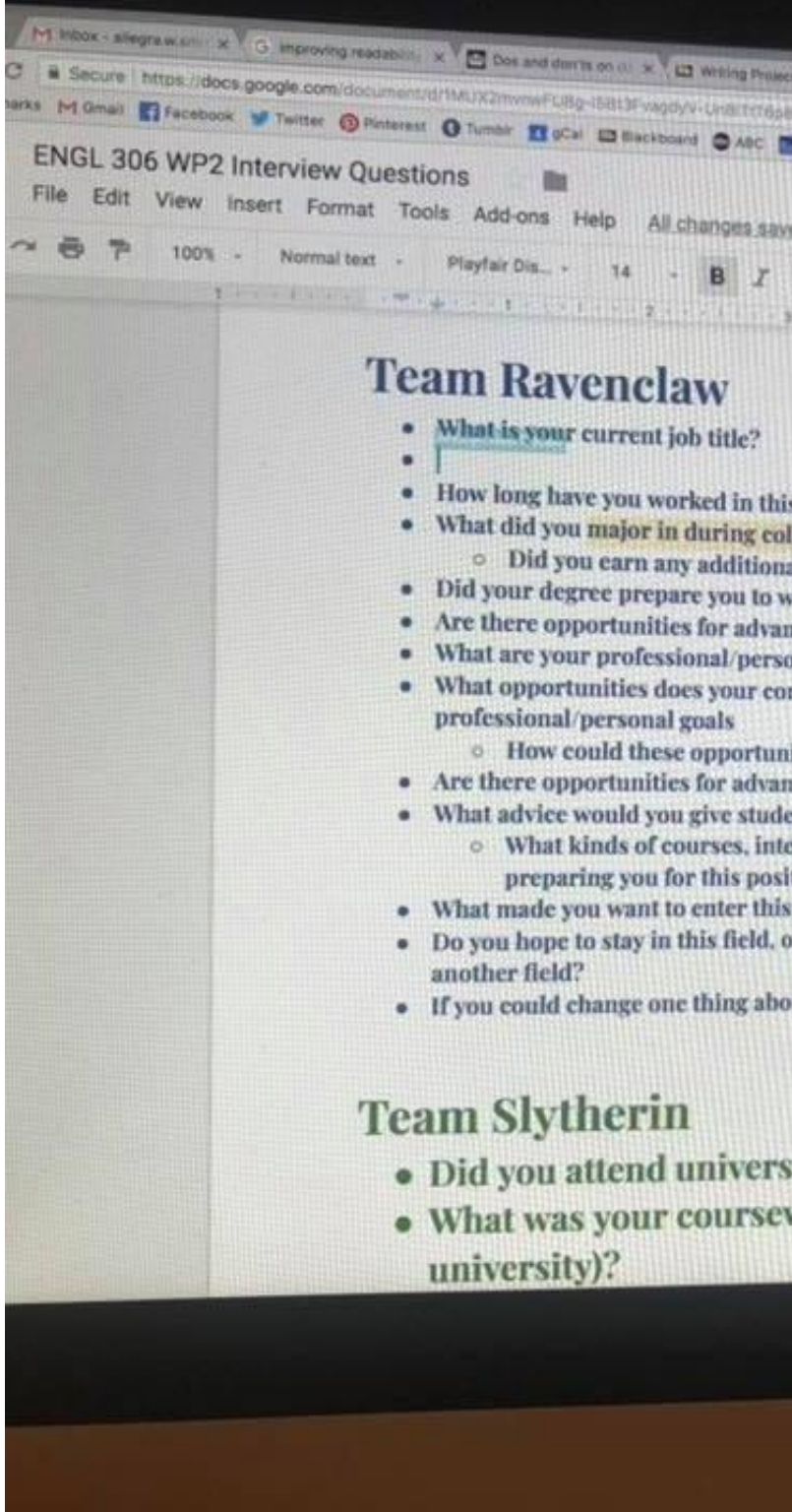
what does this even look like?

NETWORKED EXPERTISE

Students build an archive of resources through learner-led presentations throughout the semester

Group Google Docs enable collective knowledge construction and remove barriers to classroom participation

Online and F2F students are subject matter experts in their disciplines and other skills; they consult each other with questions first before me



AUTONOMY & SELF-DIRECTION

Developing students' ability to pose their own questions and design methods to seek answers to them

Making assignments applicable to disciplinary contexts through crafted scenarios and open-ended deliverables

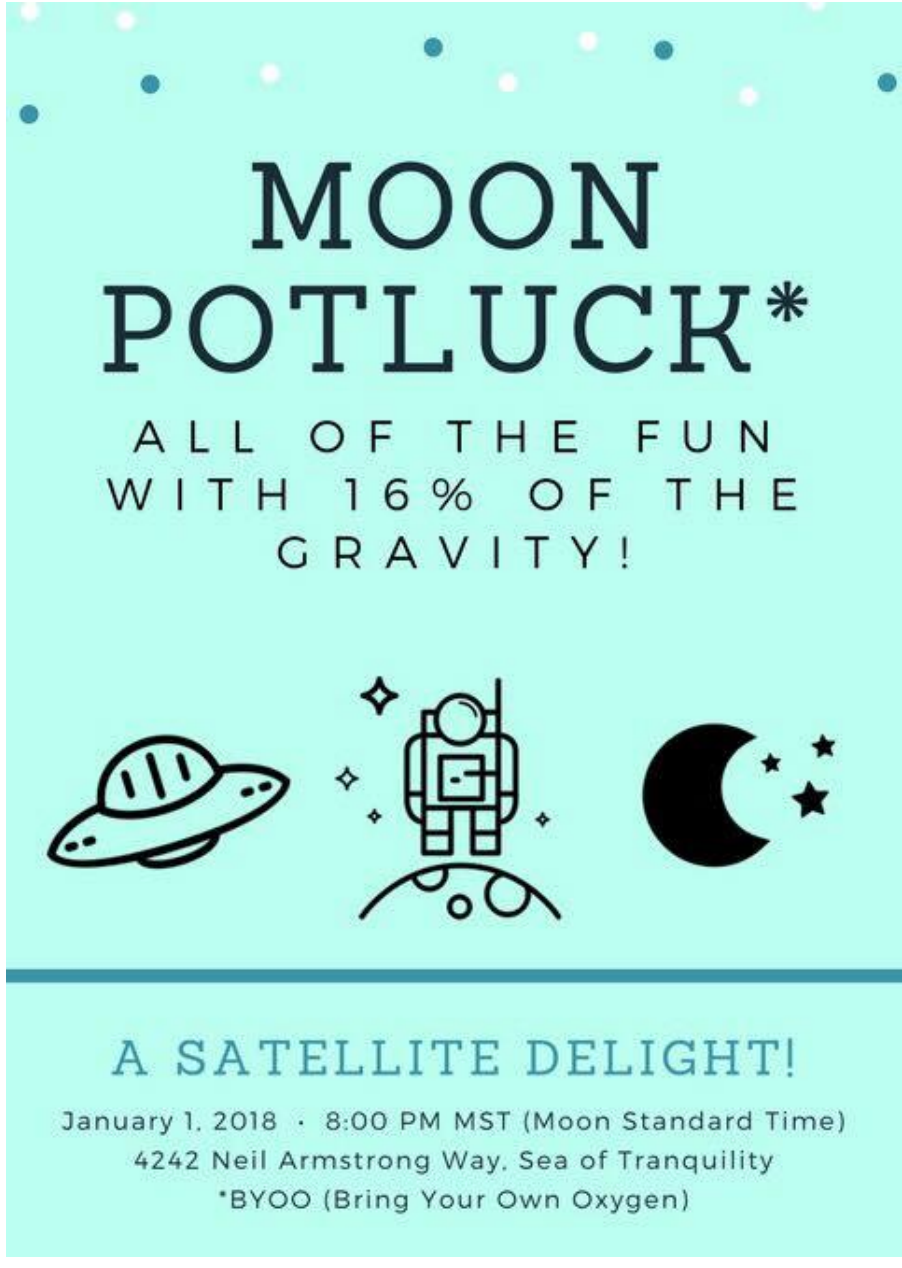
Encouraging reflection and self-awareness of writing process: what conditions or resources do you need to produce your best work?

PRACTICE THROUGH PLAY

Building technology skills with both industry-standard software and free, open-source programs

Offering low-stakes opportunities to try out genres and tools first, before applying knowledge to public or client projects

Removing barriers to access by providing flexible deliverables and/or deadlines



BUILDING SCENARIOS

AERO/ASTRO ENGINEERING

Pitch an experiment under 200 pounds to be sent to the International Space Station for a relaunch of NASA's "Getaway Special" program

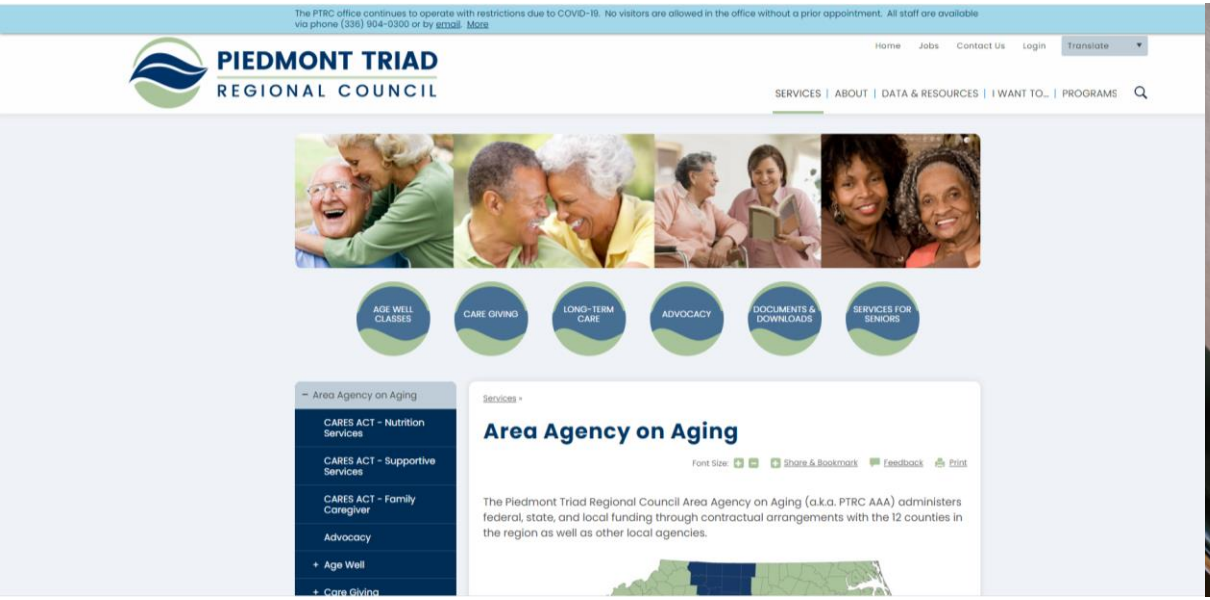
HEALTH & TECHNOLOGY

Reimagine Walt Disney World's onboarding and offboarding procedures for its attractions during COVID-19, to protect guests and cast members

AVIATION & MANAGEMENT

Respond to a billionaire investor's request for bids for personalized management and private charter services for his fleet of luxury aircraft

BUILDING CONNECTIONS



I want to branch out into experiential learning, specifically service learning that connects students with local organizations in need.

- Building capacity
- Designing documents for professional portfolios
- Conducting on the ground research

EXAMPLES

(STUDENTS IN MY CLASSES PRODUCE REALLY COOL WORK.)

DON'T READ OUR SH*T

ENCRYPTION IN THE UNITED STATES

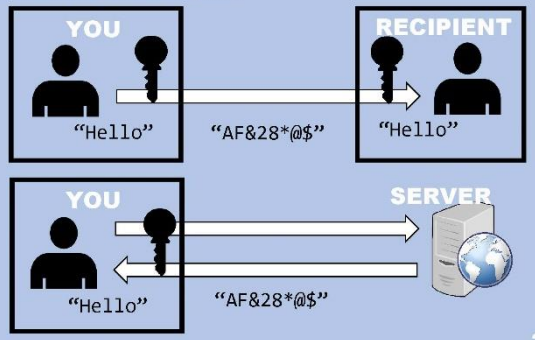
By Nicholas Masso

The EARN-IT act is threatening our online privacy. What can you do about it?

1

What is Encryption?

Encryption is the process of turning data into a code that is only able to be read by the sender and the recipient. This prevents hackers and third parties from using this content to learn things like credit card numbers and other sensitive information.



2

What is Encryption?

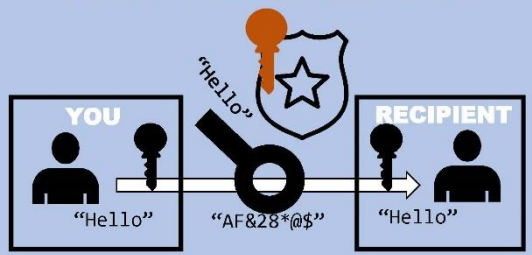
This process also keeps data on your device protected from being read by someone else. When you unlock your phone, this decrypts the data stored on it. Currently, authorities cannot break this encryption*, and would have to take you to court. You can still withhold the information, but it might result in charges.

*police departments cannot force you to unlock a phone! This includes with fingerprints and face scanning.

3

What's the EARN-IT Act?

If you send something illegal online, the government cannot litigate the website for your actions. However, the EARN-IT act looks to change that. Websites would have to allow the government to view messages WITHOUT a warrant or probable cause. This would require letting them break the encryption. This is not only a violation of privacy, but also weakens all forms of internet communication to hackers.



4

What can you do?

- **Contact your representatives**

The Electronic Frontier Foundation (EFF) has an easy tool to contact your government reps.

https://act.eff.org/action/stop-the-earn-it-bill-before-it-breaks-encryption

- **Download Signal Messaging App**

This app is based entirely around privacy. While twitter can be audited to show messages you have stored on their servers, Signal keeps everything between you and your friends.

https://www.signal.org/

5

The Modern Classroom

A PARENT'S GUIDE TO TECHNOLOGY IN SCHOOLS

63%

OF K-12 TEACHERS USE TECHNOLOGY DAILY WITH THEIR STUDENTS

Technology gets a bit of a bad reputation among parents.

Understandably so, too—it's not uncommon for a child to choose to play a video game instead of doing homework, and the rise of social media has also given rise to things such as cyberbullying. However, technology is becoming more and more prevalent in our everyday lives. From the way we **work**, **communicate**, and **grow**, technology plays a vital role, and it's important for the modern classroom to reflect this. Despite its mixed reputation, technology can be a **wonderful**—if not vital—supplement to a student's education.

Engagement

- Incorporating different types of instruction and activities within the classroom can encourage both **increased student engagement** and **greater retention of material**.
- The act of **gamifying** typically monotonous tasks and lessons can encourage students to actually **learn**, **analyze**, and **apply** material.

Community and Collaboration

- The use of technology encourages students **to work with peers**, **give and get feedback**, and **share their finished work with others**.
- Digital apps and websites such as Google Drive increases the **efficiency and ease** of group work by allowing students to **instantaneously communicate** with their peers, even while at home.

Accessibility

- **Assistive technology** is the term for tools and devices used by students with disabilities that allow them to perform to their highest ability within the classroom.
- Many times, students with disabilities will have **modified personal devices** that cater to their **individual needs**.
- Assistive technology allows students with disabilities **greater independence** and **access to materials**, increasing their **chances for success** and **meaningful learning**.
- The **normalization** of personal devices for all students helps students with disabilities to feel **less singled out**.

Development of 21st Century Skills

- The use of technology in the classroom helps students to **develop skills** they may need later on in life, either in a continued education, the workplace, or performing daily tasks.
- These may include a number of **21st Century Skills**, a set of skills deemed necessary for students to **succeed in our modern world**. They include...

Critical Thinking | Creativity | Collaboration

Communication | Information Literacy | Media Literacy

Technology Literacy | Flexibility | Leadership

Initiative | Productivity | Social Skills

How can you get involved?

- Encourage your student to **separate "fun" technology time from "school" technology time**. This may be a **mental** separation or a more **physical** one, such as completing homework in a separate room than video games or TV are enjoyed in. Creating a good study environment in the home may be more challenging when technology is involved, but it will be very beneficial.
- Encourage your student to keep **instructional materials** or **directions** pertaining to their classroom technologies. This way, you can **reference** them later on in case of a **technology emergency**, or if you're simply just curious about your student's classroom experience.
- **Establish a mode of communication** between yourself, your student, and your student's teacher. While some teachers prefer to keep their contact with parents limited, **many teachers**, especially those in **younger grade levels**, will gladly answer any concerns or questions you may have about your students or technology. Having an established mode of communication will help ensure that everyone involved in your student's educational experience is on the same page.

Sources:

Day, S. L., & Edwards, B. J. (1996). Assistive technology for postsecondary students with learning disabilities. Journal of learning disabilities, 29(5), 486-492. Accessed from: http://www.southwestada.org/html/publications/schools/postsecondary/postsecondary.html

Stauffer, B. (2020, March 19). What are 21st Century Skills? Applied Educational Systems. Accessed from: https://www.aeseducation.com/blog/what-are-21st-century-skills

Top 5 Benefits of Technology in the Classroom. (n.d.). Walden University. Accessed from: https://www.waldenu.edu/programs/education/resource/top-five-benefits-of-technology-in-the-classroom

WHERE DOES MY ELECTRICITY COME FROM?

Electricity is typically generated at **power plants** through combustion or nuclear fission engines. Solar, wind, and hydro are a few renewable energy sources too.

www.eia.gov

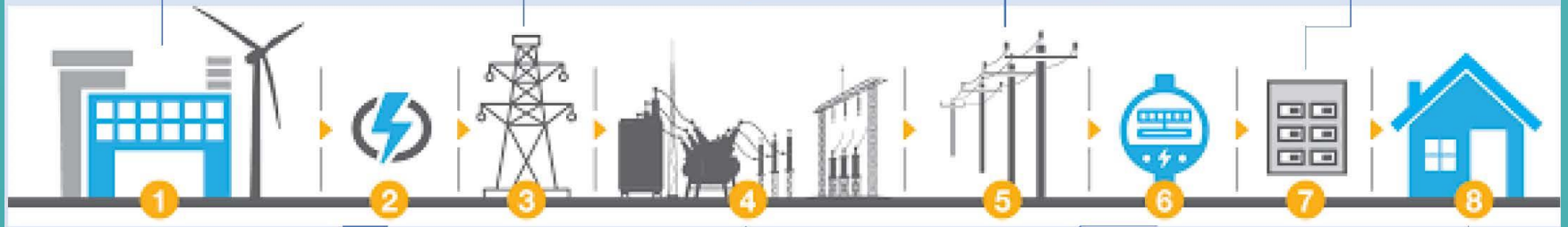
These **distribution lines** or high voltage power lines carry up to 765kV (765,000 volts)!

www.osha.gov

Power lines transfer voltages around 7,200V. Transformers step this down again to 240V to go into your home. These are the gray canisters on the poles or the green boxes on the ground.

www.science.smith.edu

Power then runs into a **breaker box**. These contain breakers that can quickly trip when current spikes to prevent damage to equipment and even fires. Breakers tripping act like a light switch by shutting off power.



Transformers are used to step voltages up. Higher voltage is more efficient in transferring electricity long distances.

Substations step down the voltage for smaller power lines that go to your home. You probably have a substation somewhere near you in your town!

Wiring runs through a **watt-hour meter** that show electricity usage measured in kilowatt hours. This is how the electric company charges you on bills!

Wiring in your **home** powers outlets, lights, kitchen appliances, fans, TVs and much more! 120V power most and 240V is used for heavier loads like HVAC systems and dryers.

WHAT COULD I TEACH AT HPU?

4110: DIGITAL STORYTELLING

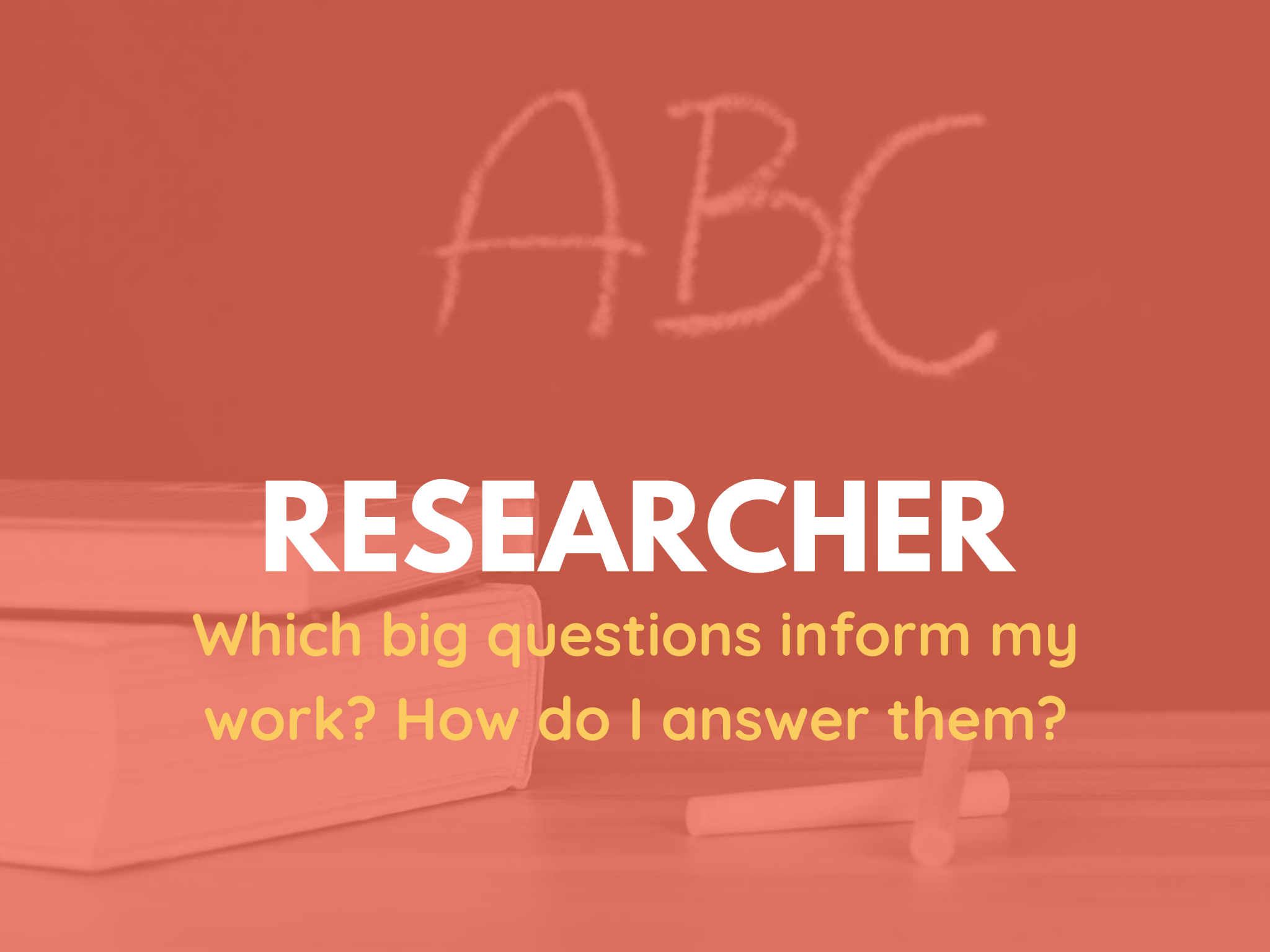
Content strategy and management, usability, communications inventories and audits, user research

2135: TECH WRITING

Specifications, technical descriptions, documentation, correspondence, proposals

4140: NONPROFITS

Fund appeals and direct mailings, press releases, newsletters, reports, issue summaries and white papers; service learning!



RESEARCHER

Which big questions inform my work? How do I answer them?

MY RESEARCH AGENDA

PEOPLE, TECHNOLOGY, COMMUNICATION

How do intersecting facets of our identities mediate our experiences with technology? How does that in turn influence our communication?

INTEGRATED THREE-PART APPROACH

Design (UX)
Documentation
Education

MY RESEARCH COMBINES

1. TECHNICAL & PROFESSIONAL WRITING
2. USER EXPERIENCE DESIGN
3. AGE STUDIES / LIFE COURSE WRITING
4. FEMINIST RESEARCH METHODOLOGY

DISSERTATION EXIGENCY

A CHANGING POPULATION PYRAMID…
Older adults are expected to outnumber children by 2035. Last year, over one billion senior citizens were alive on the planet.

…BUT AN UNCHANGED RESEARCH LANDSCAPE?
Technical and professional communication (TPC) research overwhelmingly focuses on school and work (despite a 2004 call to attend to aging!)

RESEARCH QUESTIONS

1. What does “everyday” computer and internet use look like for older adults living in a residential senior community?
2. What are the goals and purposes for technology usage articulated by older adults in this community? What motivations shape these?
3. What factors (material, infrastructural, embodied, cognitive, cultural, design, etc.) help or hinder older adults from realizing their technological goals?

4: WHAT RECOMMENDATIONS

can be generated for a more inclusive experience architecture?

(given this age cohort's experiences with and reflections on technology)

METHODS

1: SEMI-STRUCTURED INTERVIEWS

Answering questions about computing skills, learning, problems
(15 participants, 7–30 minutes)

2: NATURALISTIC (UNSTRUCTURED) OBSERVATIONS

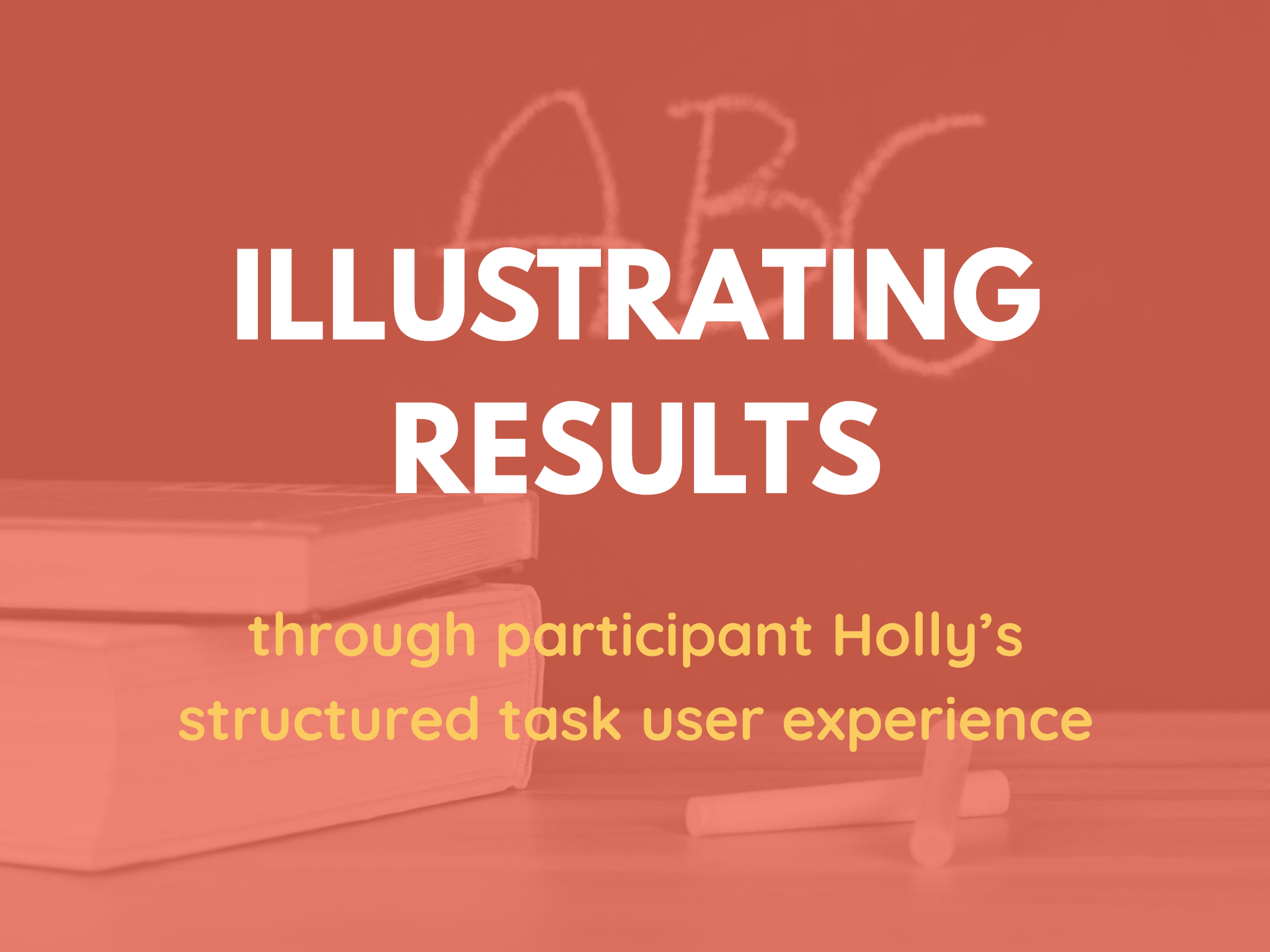
Walking through “everyday” computer use while “thinking aloud”
(7 participants, 10–40 minutes)

3. STRUCTURED TASK ANALYSES

Completing a series of tasks to identify pain points
(6 participants, 15–45 minutes)

RESEARCH SITE

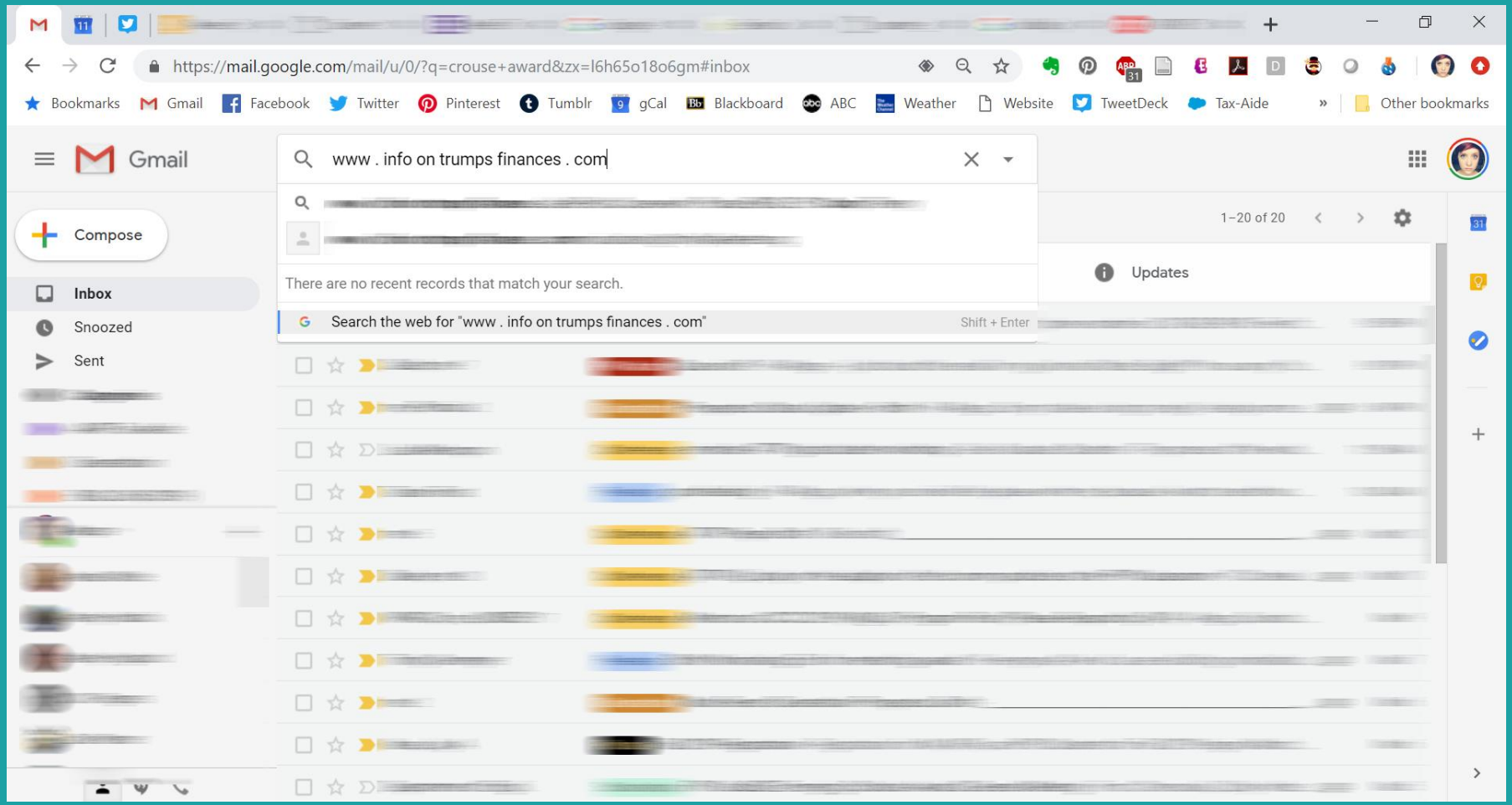
- The Villages, a central Florida retirement community
  - The United States' fastest growing city
- Population has doubled since 2010
  - 51,000 to 114,000 residents
- Median community age of 67.4
  - Research sample median age was 82.2
- Interviews and observations conducted in an independent living apartment facility



ILLUSTRATING RESULTS

through participant Holly's structured task user experience

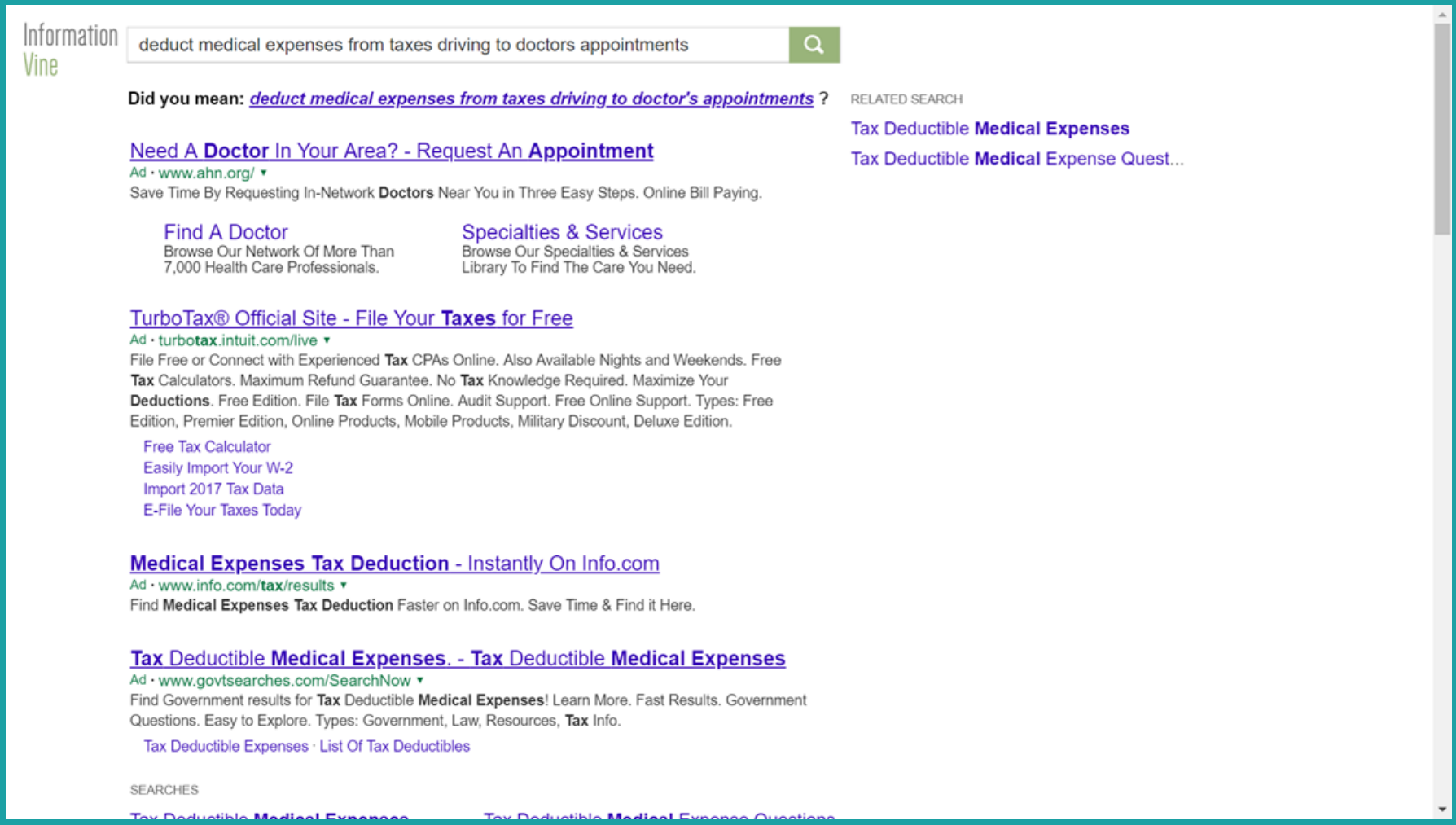
SEARCH STRATEGY



HOLLY'S USER JOURNEY

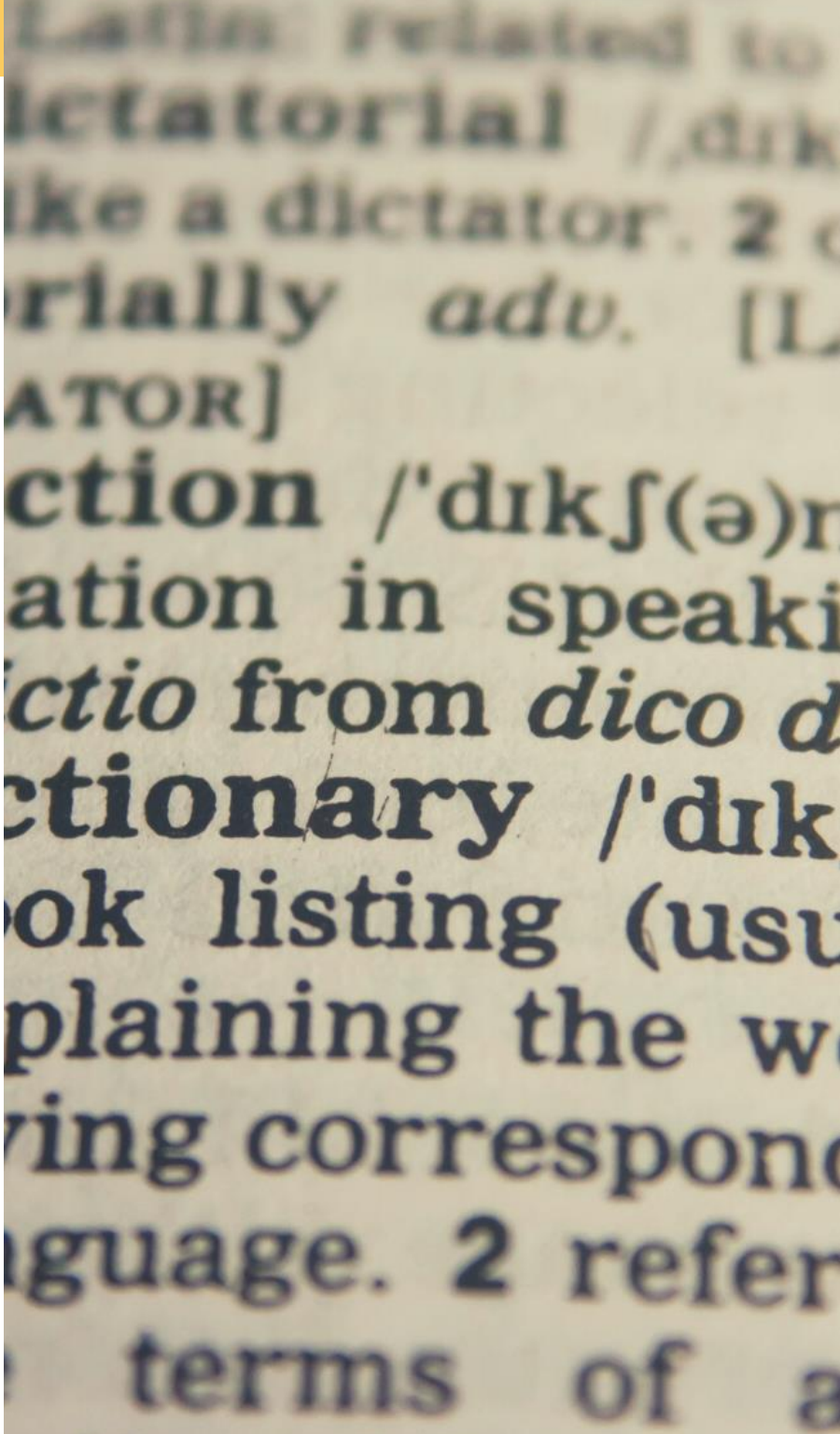
- Click first result
    - [AD] Tax Deductible Medical Expenses | Search & Find Quick Results
- Sponsored results appear
    - For the same query on a different site, Information Vine (potentially dangerous paid search provider)
- Scan results, select first option
    - [AD] Medical Expense Tax Deductions – Find Your Answer Today
- New search results appear
    - Advertisement links to ask.com's results for the same query; lather, rinse, repeat

HOLLY'S USER JOURNEY



IMPLICATIONS

1. Revalue older adults' technology engagement as literate activity
2. Intervene through design, documentation, and instruction
3. Give back to older adults in our regions and communities
4. Incorporate age and aging into the technology design process, considering users different from ourselves



CONSIDERATIONS SHAPING OLDER ADULTS' UX

1

EMBODIED/MATERIAL

Optical and visual, auditory, motor skills and control, dexterity and flexibility, mobility

2

COGNITIVE/PSYCH

Cognition, mental flexibility, sorting and filtering (Universal Design)

3

EDUCATIONAL

When/where users learned tech skills (or didn't!), literacy sponsors, documentation and help

4

CULTURAL / GENERATIONAL

"curriculum of aging" (Bowen), generational logics, norms, language and identification, assumptions about a target user

CULTURAL/GENERATIONAL

Security Questions.

Select three security questions below. These questions will help us verify your identity should you forget your password.

Security Question: What was the name of your first pet?

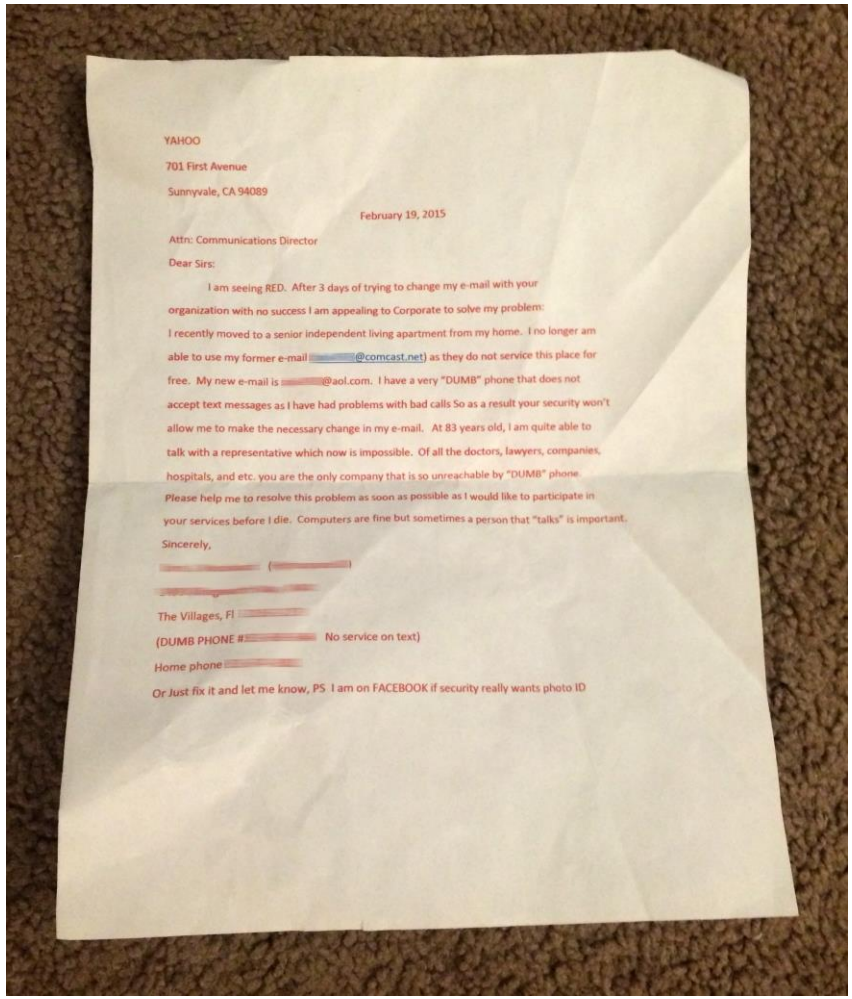
Answer:

Security Question: What is your dream job?

Answer:

Security Question: In what city did your parents meet?

Answer:



YAHOO
701 First Avenue
Sunnyvale, CA 94089

February 19, 2015

Attn: Communications Director

Dear Sirs:

I am seeing RED. After 3 days of trying to change my e-mail with your organization with no success I am appealing to Corporate to solve my problem:

I recently moved to a senior independent living apartment from my home. I no longer am able to use my former e-mail [redacted]@comcast.net) as they do not service this place for free. My new e-mail is [redacted]@aol.com. I have a very "DUMB" phone that does not accept text messages as I have had problems with bad calls So as a result your security won't allow me to make the necessary change in my e-mail. At 83 years old, I am quite able to talk with a representative which now is impossible. Of all the doctors, lawyers, companies, hospitals, and etc. you are the only company that is so unreachable by "DUMB" phone.

Please help me to resolve this problem as soon as possible as I would like to participate in your services before I die. Computers are fine but sometimes a person that "talks" is important.

Sincerely,

[redacted]

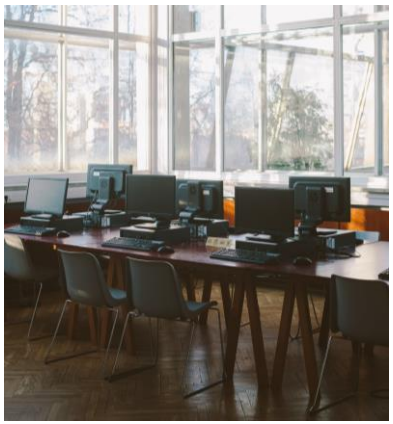
The Villages, Fl [redacted]

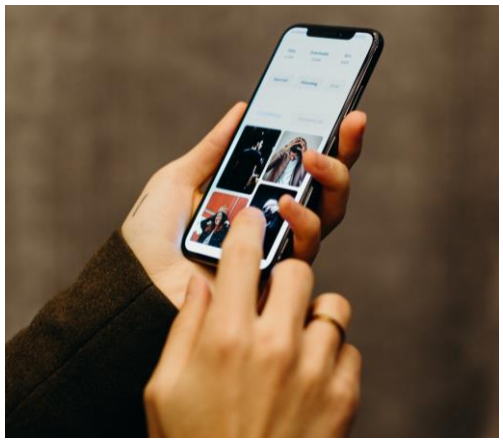
(DUMB PHONE # [redacted] No service on text)

Home phone [redacted]

Or Just fix it and let me know, PS I am on FACEBOOK if security really wants photo ID

LANGUAGE & IDENTIFICATION





INDEFINITE ARTICLES

Allegra: 9 (30%)

Participants: 52 (75%)

POSSESSIVE DETERMINERS

Allegra: 21 (70%)

Participants: 17 (75%)

MEANING?

Obtrusiveness is a key factor shaping technology perceptions and adoption for older adults!

RESEARCH AGENDA

SEARCH / INFO LITERACY

Article in *Technical Communication* (for scholars and practitioners)

RHETORIC OF HEALTH & MEDICINE

Patient experience design (PxD) interventions made by older adults

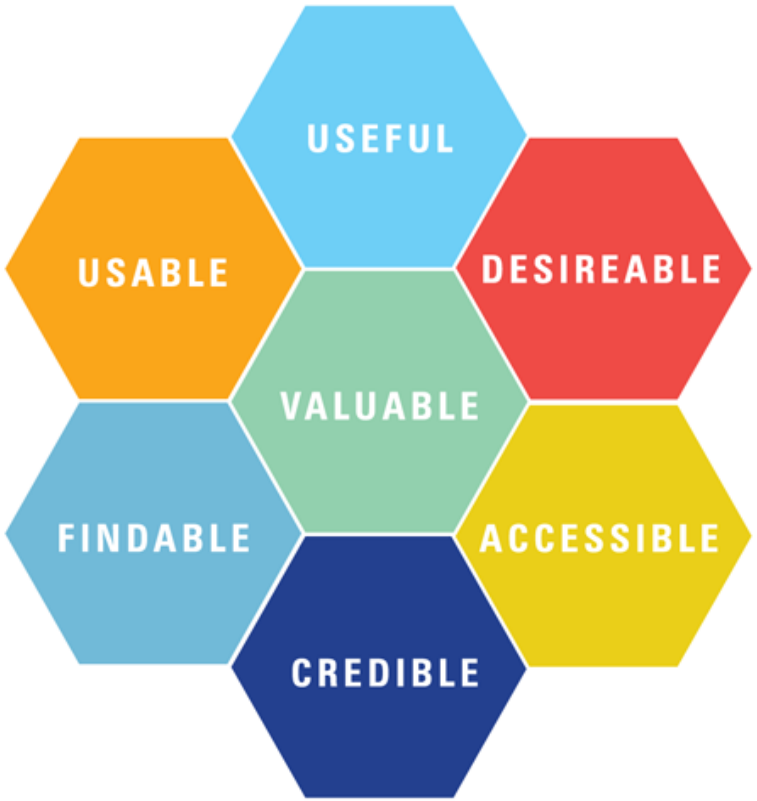
STUDENT UX & USER JOURNEYS

Applying UX frameworks to academic programs and services; TPC program and curriculum development

SOCIAL ENTERPRISE

Journal of Business and Technical Communication article on professional writing class grounded in social justice

PROGRAM & CURRICULAR DESIGN



Applying methods and frameworks like the UX honeycomb (Morville) to the design of academic programs, services, experiences, and supports by prioritizing user narratives and journeys

ADMINISTRATOR

What have I created and managed? How do I architect programs and curricula?

ONLINE COURSE DEVELOPER

Designed, created, rolled out Purdue's first ever online first-year writing course; trained instructors; built curricula and policies

PW TEACHING MENTOR

Gave new instructors a crash course in TPC theory and pedagogy; observed classes; facilitated professional development

ASSISTANT DIRECTOR OF PW

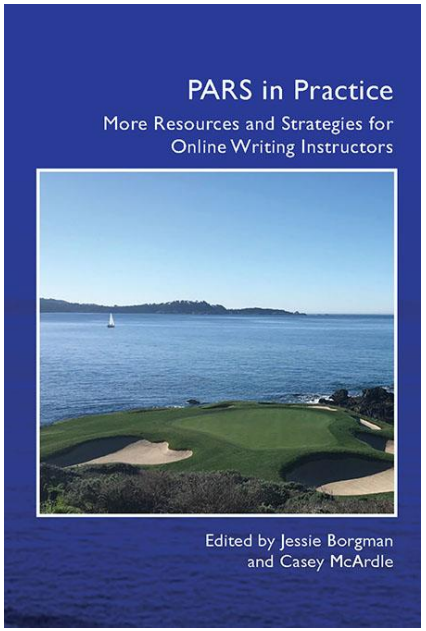
Created program teaching guide; organized professional development; facilitated transition to online writing instruction during COVID-19

ENGL 106 ONLINE

- Designed fully online, asynchronous first-year writing course for 8- and 16-week delivery
    - Two course themes: digital rhetorics, academic writing & research
- Built curriculum from learning outcomes
- Focus on personalization, accessible pedagogy, responding to student needs

MODULAR CURRICULUM

Project 1 Options	Project 2 Options	Project 3 Options
Digital Autobiography Narrative of student's experience with a digital tool, technology, or space	**Researched Argument** Student conducts secondary research to construct an argument about digital technology in their field of practice, or another discipline that's of interest	**Advocacy Infographic** Remediate Project 2 into an infographic aimed at informing and persuading a different audience, using Piktochart
Digital Artifact Analysis Select digital tool, app, or device and engage in a rhetorical analysis to shed light on its context and meaning	**Community of Practice Report** Conduct primary and secondary research on the technology use of a community of practice (Wenger, 2011)	**TED Talk** Remediate Project 2 into an interesting and informative TED talk, geared toward a specific audience and event
Profile of a (Virtual) Place Identify a digital community or website and analyze its audience and features	**Mapping the Problem Essay** Identify a technological problem to be overcome, and collect primary data (through interviews, surveys, observations, etc.) to place into conversation with the existing conversation on the issue	**Transmedia Storytelling** Students select from a list of books, films, and games, and present a theme from that media in a new medium (blog, website, video PSA or trailer, magazine article, etc.)



Grid approach for mixing and matching assignments for online writing instructors

- Saves time and resources
- Ensures consistent learning progression and adherence to programmatic outcomes

ACCESS

Ensuring access to resources; multiple points of access into content; transparency for staff; foregrounding user-centeredness from the beginning of the design process

EQUITY

“Start with what you know:” language and pedagogy; anti-racist and accessible linguistic practices (removing harmful language and policy); meeting students where they are at pedagogically

DESIGN

“Engineers are not the only professional designers; everyone designs who devises courses of action aimed at changing existing situations into preferred ones” (Herbert Simon)

AT THE HPU WRITING CENTER

MENTORING

Working with students to build capacity in online and offline tutoring; building a culture of responsive listening; recognizing distributed agency and networked expertise across the center

PROFESSIONALIZING

Cultivating tutor skills through projects (research and assessment, resource building, document creation, etc.); presenting at conferences

OUTREACH

Working across units to serve the entire student body; collaborating with the community WC and other WCs in the area (Salem) to engage the community

THANK YOU

for your time!

QUESTIONS? IDEAS?

ALLEGRA W. SMITH | ALLEGRA-W-SMITH.COM

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