

iCons Case Study 1 Water Scarcity and Awareness: Is There a Correlation?

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Introduction

Research Question

Is there a **correlation** between people's consumption of water and their knowledge on the water scarcity crisis?

Hypothesis

The more a person is educated on the water scarcity crisis, the more **changes** they are willing to make to conserve the amount of water they use.

Significance?

If people change their behavior with greater education, then water scarcity and its prevention should be a **required** topic studied in **public school systems** .



Experiment Design

Participants

UMass Amherst students

Quiz Design

Part One

- Gathered information on student's **demographics**
- Tested **initial knowledge** on water crisis
- Data collection on daily **habits**

Part Two

- 3 linked sources providing **information** discussing the severity of the water scarcity crisis (2 videos and 1 article)

Part Three

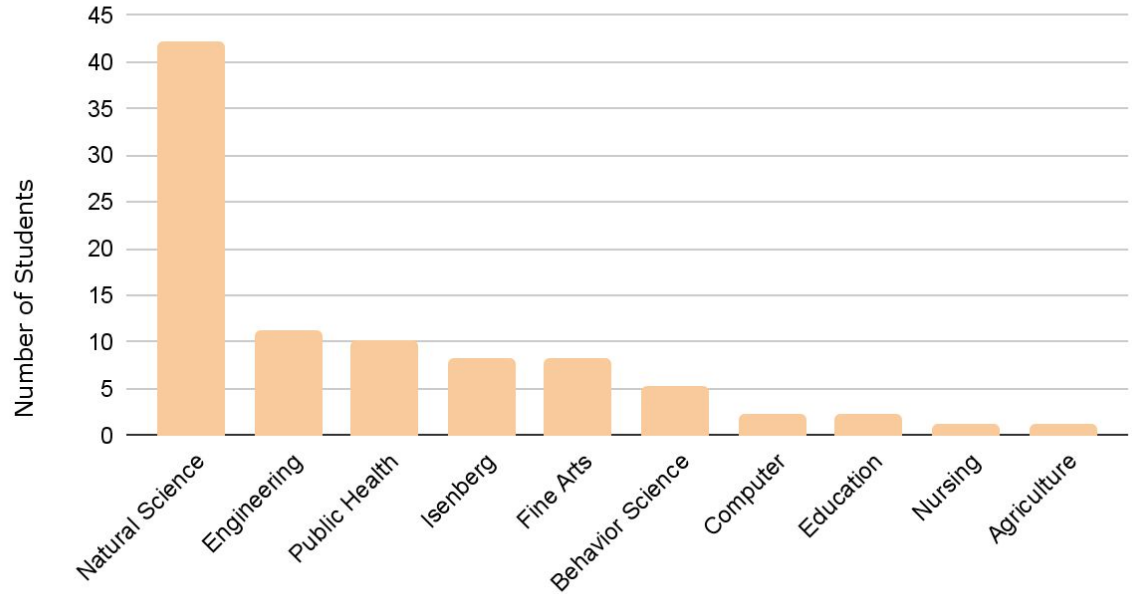
- questions **similar to** part one asking if new knowledge will have an **influence** on their water intake



Preliminary Data (Demographics)

- 90 student responses
- 70% freshman (64)
 - 9% sophomore (8)
 - 9% junior (8)
 - 10% senior (9)
 - 2% graduate (1)

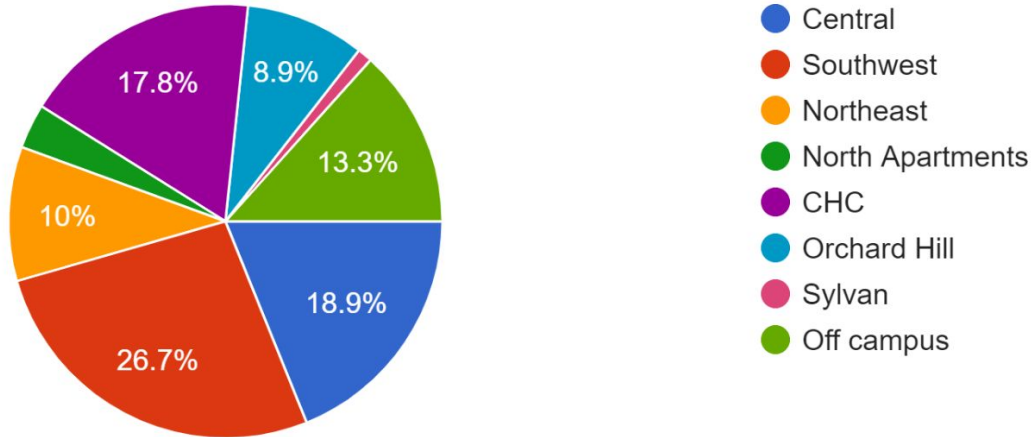
Student Majors



Preliminary Data (Demographics)

What residential area do you live in?

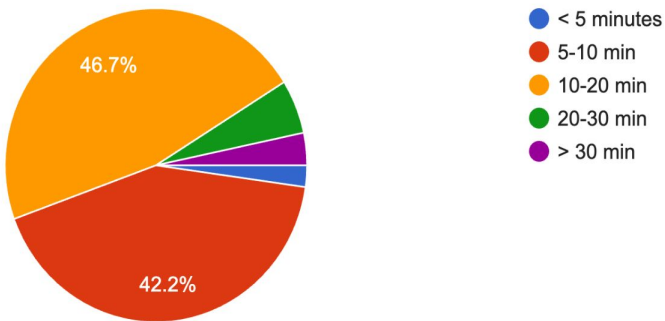
90 responses



Preliminary Data (Water Use)

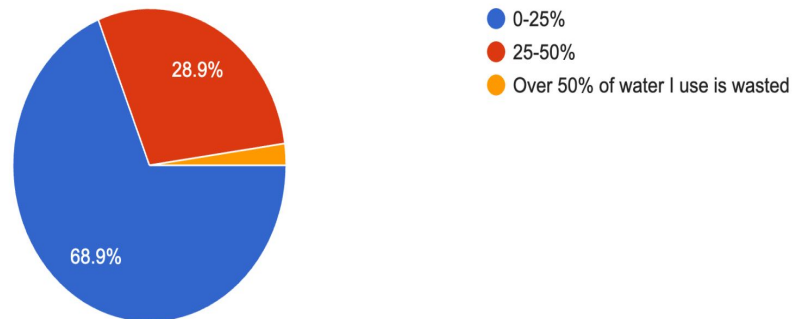
Average Length of Shower

90 responses



How much of water used is wasted?

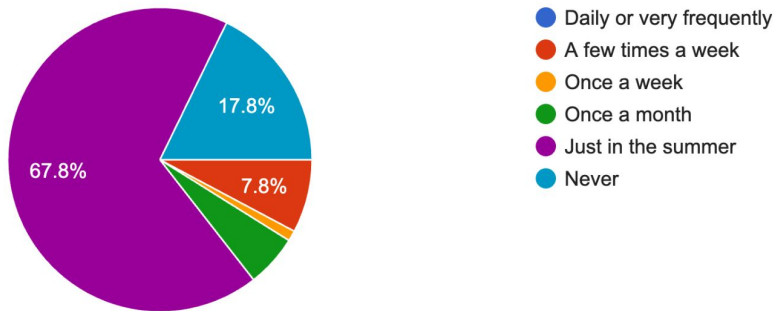
90 responses



Preliminary Data (Background Info)

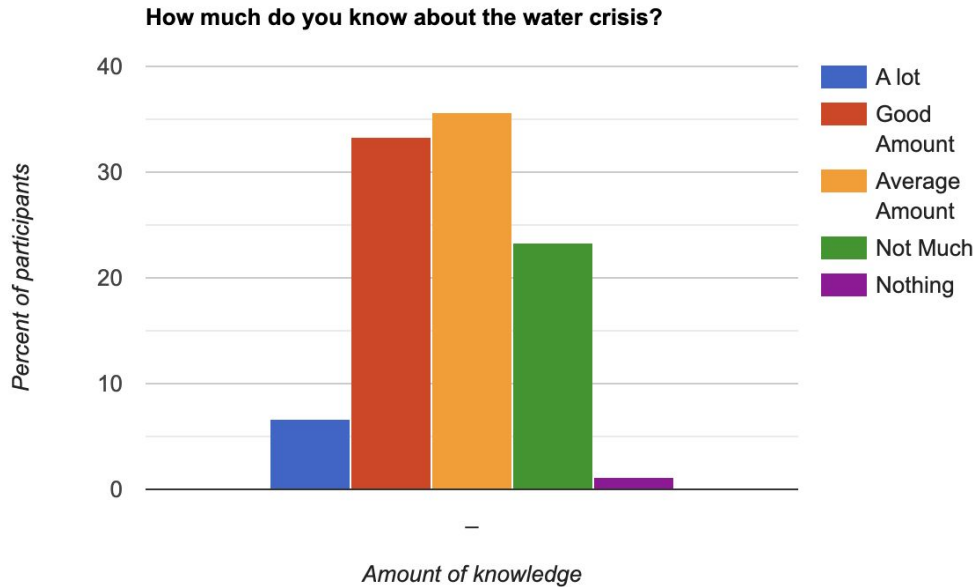
How often do your sprinklers run at home?

90 responses



- Over 75% of participants are not vegan/vegetarian
 - Meat industry uses 726 billion gallons of water a year
 - Total food requires 1.5 trillion gallons a year
 - Half of water used for meat
- Almost 80% of participants “sometimes” use second hand clothing.

Survey Results

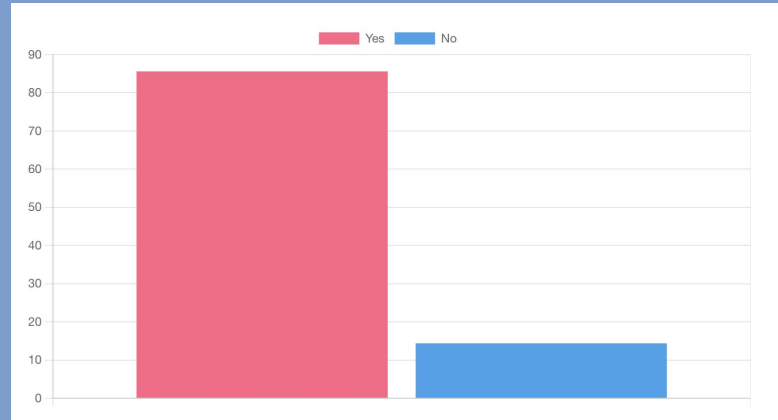


- The informational articles/videos seemed to promote a conscious change in participants
- Over 90% of participants learned more
- Does this survey promote a higher level of water use consciousness?
 - Short term: ✓
 - Long term: ?

What exactly does this mean?

- Most who are unaware of the issues do not know the effects they have
- **“Blissful ignorance”** - especially for the upper class
- Lower class citizens get the brunt of the issue - calls for change
- **Isn't a human-only issue** - affects the whole planet

“Will new knowledge of the water crisis prompt you to be more aware of your water usage and spread the word to others?”



Pink = yes
Blue = no

Questions from the sampling group

“Is there any new technology being developed to help prevent this crisis?”

One new form of technology is a tool called a “Desolenator,”
- “is a technology that is working to help solve the water crisis through a process known as solar desalination.”

From <https://drinkoptimum.com>

“What does UMass do to help reduce water waste?”

UMass has a program called #UMassSavesH2O

- Uses flyers to incentivize reporting leaks
- Advises against taking long showers and leaving faucets running

From <https://www.umass.edu/sustainability/water-conservation>

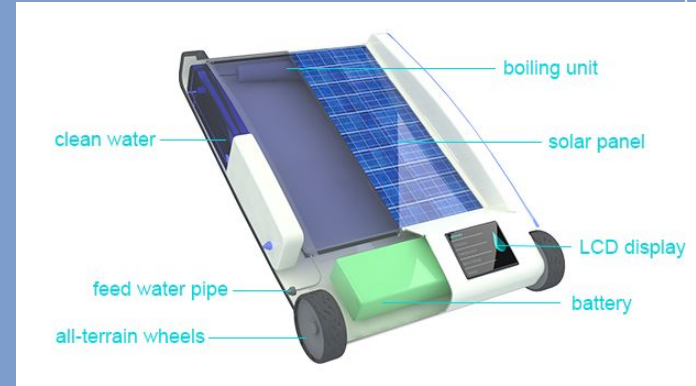


Image of the Desolenator

Critiques/Changes

✗ Specific Topic Testing

- Ex. water usage in meat industry, clothing industry, energy usage, etc.

✗ Variety of Design to Answer Questions

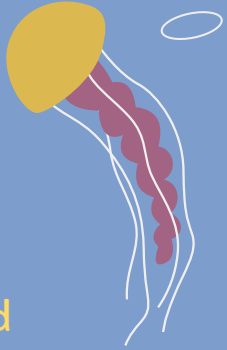
- There may have been a different way to answer this same question.

✗ Ages Were Not Consistent

- Results were mostly skewed towards freshman class - how to avoid this?

✗ Unknown Long Term Results

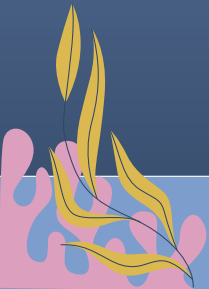
- We are unsure if awareness will produce a long term success rate as it is “normalized”



Conclusion

- Increase in awareness = increase in willingness to change
- From results - most surveyees are unaware of issues. This was expected
- Revisiting original question: Is there a correlation between water usage/waste and amount of education/awareness of the water scarcity issue?
 - Results point to yes

Primary takeaway: education will equal change





Thank You!

Any questions?