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Design Thinking Challenge

Karen McMurray and Melissa Miller

Thanks for taking the time to view our solution for our design thinking challenge.

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Background

- Driver workforce
- Safety meetings
- Covid response
- 60% participation rate
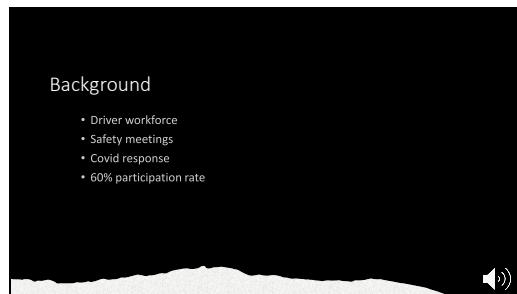
Our challenge centers on a transportation company that operates nationally. Melissa is the learning and development manager of this company and one line of business employs school bus drivers. School bus drivers who are excellent at doing what they were hired to do - drive passengers safely to their destinations.

Prior to the covid 19 pandemic drivers were invited to attend four safety meetings per year. Safety meetings were opportunities to share knowledge and be kept up to date with changes or incidents that were companywide. If the drivers attended all four safety meetings, they would receive an award and a financial bonus.

When covid restrictions were put into place the safety meetings moved to an online format. This suits the organization as the costs for training are reduced and there are less changes in response to covid restrictions with a blanket online approach. May drivers have provided positive feedback about the flexibility

and convenience of participating online however there are challenges for some that are preventing them from participating.
The participation rate in safety meetings is 60%.

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The Process

We used the d.Stanford Design thinking process to create solutions for our problem.
In the empathy stage it was clear to me as the interviewer that Melissa was being stretched in her role to provide help for drivers to navigate the online safety meetings. While the organization has a help desk the true technology issues are handled by that department. Many requests for assistance from the driver's online safety meetings were being sent now to Melissa. The types of requests she is receiving are around navigating the technology or knowing how to log in or being unsure if their answers in the online training were accepted. The IT group handles true IT problems whereas they don't handle the meeting of people problems that arise from the technology use. In our interview it was clear this was an aspect of her job that was an add on. Melissa was able to convey the empathy for the drivers to me. Her statement, that drivers are hired to drive, and her workforce are excellent drivers spoke to the respect she has and at the same time the concern she
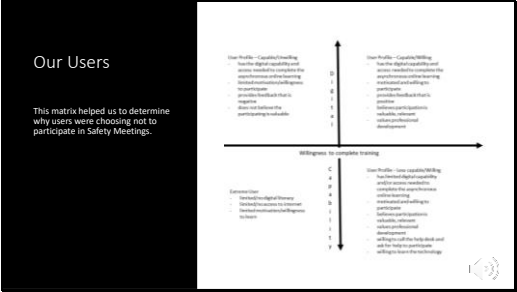
has for them and the lack of engagement in their safety meetings.

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The Problem

How do we increase the participation rate in seasonal safety meetings?

Through the process we were able to define the problem broadly as - How do we increase the participation rate in seasonal safety meetings?

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Our Users

This matrix helped us to determine why users were choosing not to participate in Safety Meetings.

Our end users share common sets of needs and characteristics. Based on feedback provided through email and phone calls to the online learning help desk, feedback forms, and social media buzz we created a matrix to categorize our user types by willingness to complete the training and ability to work digitally.

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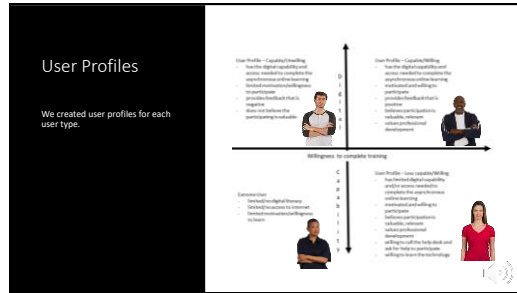
We created user profiles for each user type in the willingness and technology capabilities dimensions from Melissa's sources. This solution was advised in the dschool Stanford bootleg deck and it resulted in a deepening understanding of our end users who we are building our solutions for.

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Our first user profile is willing to participate, and they are able to work with the technology to complete their training. One thing that we know from this user profile is a barrier to attending safety meetings has always existed for them. They needed to travel long distances to attend the in-person safety meetings. Their ability to navigate technology allows them to avoid the long distances and they can still complete this training. For this user group the online solution is an improvement over the pre-covid in person modality.

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A second profile emerged of a driver who while willing to complete the training online needed more assistance to navigate the technology. If they can become comfortable with the technologies, they could join the capable and willing participants.

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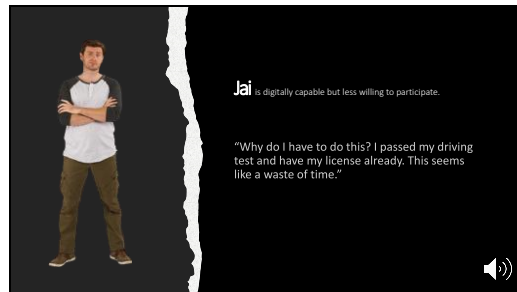
Our third user group can engage with the training. They have the technology skills but not the will to do so. Even with the financial bonus they are hesitant to do safety training seeing it as a top-down directive which makes them unwilling to participate.

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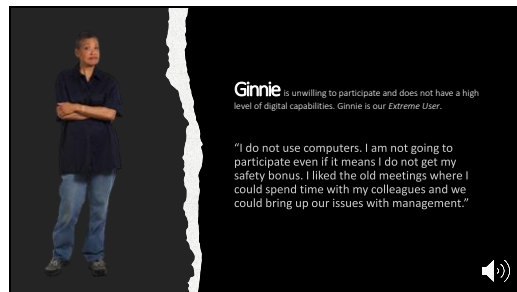
The fourth and most concerning user is our extreme user. This user group is not familiar with technology, and they are unwilling to complete the training. This user group often comments they miss the camaraderie of the in-person safety meetings.

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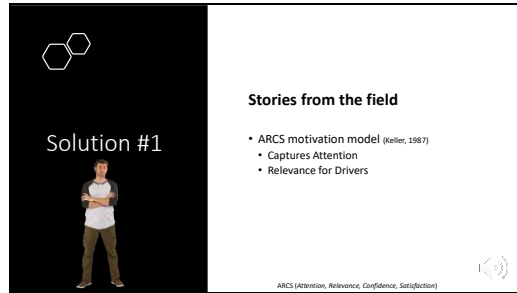
Our first solution employs principles from the ARCS (Attention, Relevance, Confidence and Satisfaction) motivation model. When sending information about the safety meetings the first point of contact is sharing a story from real world examples. Sharing stories that have practical applications to the drivers creates attention and relevance for the drivers to engage further with the safety meetings.

For example, a driver opens their email and is given a current story from another driver in the workforce about experiencing winter driving conditions. A story such as this is relatable and has practical application for the end users. It helps to create motivation to engage with the safety meetings and the messaging further. Drawing the end users in to engage further with the safety meeting information.

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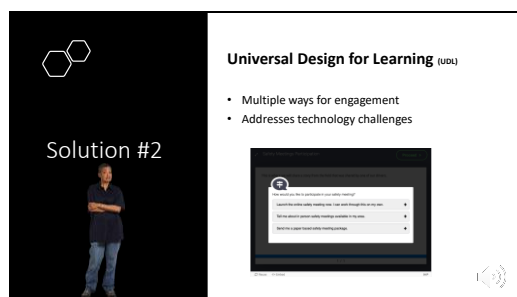
Our second solution employs principles from the universal *design for learning and the critical design approach models.*
To prevent technology barriers from limiting participation we needed to dissolve barriers and make the training accessible.
Once the drivers are engaged with the initial story they are given choices in how to engage in their safety meetings.

First, they can choose to take the training Fully online and asynchronously launching the training right away or they can

Find information about attending a meeting in person in their region or they can request a

mail package sent to their office location that they can complete by hand and send in.

These options reduce the barriers that exist with the technology aspect of the training. Aligned with the UDL guideline of providing multiple means of expression this solution allows for varied responses for navigating the meetings and it provides a way for our drivers to work towards goals that may challenge them to adopt technology in ways that stretch them but are achievable.

If the drivers have made it as far as reading the introductory story from the field (and they did not think they could) it is not much farther to attempt to launch the online safety training. This provides a way for our drivers like Ginnie to engage with the online training. She only needs to choose to launch the online safety meeting to attempt to complete it on her own but it is an option not the only choice.
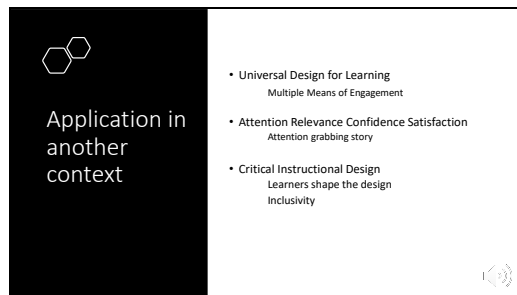
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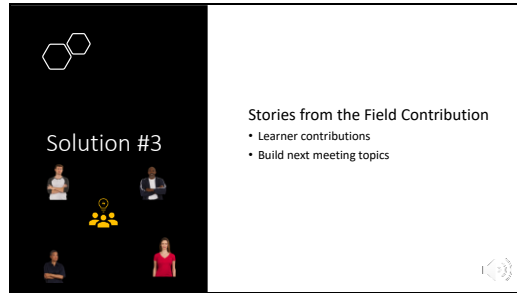
The third solution employs principles from the critical instructional design approach (Morris, 2018). Where learners are shaping the design through the forwarding of topics and materials for future meetings.

At the end of their training (no matter what delivery mode they subscribe to) drivers are asked to contribute stories from the field and make suggestions for future meetings. This can include photos, videos or stories in audio or written format.

This builds the content for future meetings through the stories sent as part of the emails but also as content for the upcoming training sessions.

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The three models that we worked with in our solution were Universal Design for Learning, the ARCS model for attention, relevance, confidence and satisfaction and critical instructional design.

In my context as a post secondary business instructor all three of these solutions could also be incorporated.

For example in an upcoming entrepreneurial class students who were asked to develop business plans using WordPress could be given choices in how to convey parts of their business plans in a similar choose your own adventure style.

While the choices may be different than the bus drivers the principle of UDL where various methods for response and navigation can be considered including audio, video or written modalities.

Story is an aspect of connection that can be applied to my context as well. Finding the relevance of the topic at hand for my students through story can deepen the meaning for students as they embark on their learning. For example, in an upcoming business ethics class a story of a graduate from our program who was the whistleblower in 2006 in the JP Morgan Chase Bank financial scandal can help students see the relevance to learning about business ethics for them.

In a class such as business ethics a conversation about what we notice about the business environmental and how it impacts our communities is an invitation for learners to shape the course design and is a similar approach to inviting drivers to submit their stories from the field.

The critical design approach creates the potential for more impactful learning and a learning environment that is inclusive to all types of learners and it can (and should be) applied in all contexts of learning design.

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Application in another context

- Universal Design for Learning
  - Multiple Means of Engagement
- Attention Relevance Confidence Satisfaction
  - Attention grabbing story
- Critical Instructional Design
  - Learners shape the design
  - Inclusivity

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We invite you to consider how the solutions we create for our bus drivers may be part of your solutions for your design challenges and in your context and thank you for your attention.

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References

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