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Overcoming Technology Illiteracy

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Author Note

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Abstract

The Community Bridges Child & Adult Care Food Program is a non-profit organization that strives to provide yearly services to the tri-county residents of Santa Cruz County, Monterey County, and San Benito County. Amidst their service providence, the agency works diligently with daycare providers. A requirement for working daycare providers is to take annual training that incorporates new regulations from the United States Department of Agriculture (USDA).

Recommendations

Keywords: Day care providers, technology illiteracy, Not understanding new material concepts, Making annual trainings more manageable

The daycare providers have barriers accessing the training online and understanding the material to implement it in their daycares. The daycare providers must learn the new regulations and incorporate them in their daycares to continue being part of the agency by meeting the requirements. The capstone project is to develop an annual training with slides and narration while providing a short quiz to assess learned information. After the training, the daycare providers will get an email with a link they can click and it will take them directly to the annual training. People will be able to access the annual training from their iPhone, iPads, Computer or any electronic devices they can log into. The idea of the link is to easily take the daycare providers directly to the required training. In addition, make the training as simple/easy as possible for the daycare providers to; understand the information provided and navigate the course with ease. The agency has found through the years that the annual training is challenging for daycare providers to understand the new concepts and the daycare providers find it difficult

to access and subsequently navigate the training. Due to the COVID-19 pandemic, in person services are limited and training has only been available online. It is especially difficult for daycare providers when there is no option for in-person training and one-on-one support is not available. The recommendation is to create a new training that is more comprehensible and easier to access with their electronic devices. Each slide in the new training will be accompanied by audio to help daycare providers that don't know how to read well. It will also provide a quick quiz in every segment to help ensure that they understand the information provided. The training would be broken down in sections; each section would have a quiz at the end. The agency would flag the questions that the daycare providers are having problems with in order to incorporate more help where it is needed. The goal is for the agency and daycare providers to collaborate in order to offer more user friendly training, and for the providers to pass their annual training so that they can keep providing services to the children and adults.

Agency & Communities Served

The agency works to serve children and adults with healthy meals. Within the daycare setting, children between the ages of zero and thirteen are served a healthy breakfast, lunch, and dinner, alongside additional snacks throughout the day. Adults are provided with a healthy breakfast, lunch and dinner. The agency only works with daycare providers that are appropriately licensed.

The program Community Bridges Child & Adult Care Food Program (CACFP) goal is to improve children's diets by offering well-balanced meals. Thus, daycare providers that participate in this program receive a monthly reimbursement for the meals served. This helps them keep the cost of daycare down and there's no charge to the parents. The agency serves Santa Cruz County, Monterey County and San Benito Counties. The agency's mission is

We envision a thriving community where every person has the opportunity to unleash their full potential. Our family of ten programs delivers essential services, provides equitable access to resources, and advocates for health and dignity across every stage of life. Every year, we meet the needs of thousands of local children, families and seniors with broad support from individuals, businesses, foundations and government. We believe that when we work together, anything is possible. A nutrition assistance program that reimburses food for licensed caregivers, providing healthy meals to support both children and adults in our community. (CACFP 2021)

Community Bridges 2019 Annual Report shows the communities that are served. Communities that they served in 2019 included South County (58%), North County (6%), Monterey County (18%), and San Benito County (18%). The people served were children ages 5 and under (46%), youth ages 6-18 years old (9%), adults ages 19-59 (27%) and 60 and over (18%)”. (CACFP 2021) The tri-county communities need and depend on the agency to assist them with nutritious meals.

Problem Description

Technology illiteracy among the daycare providers, accessing the training online, and understanding the material to apply it in their daycares are barriers that the daycare providers are facing every year when their annual training is due. The daycare providers are expected to comprehend and apply the new USDA regulations of their annual training while also passing the quiz to continue to be part of the CACFP program.

Contributing Factors

Access to Education Majority of daycare providers did not have access to education and didn't finish elementary school in their native country. Additionally, when they migrate to the United State of America they continue to not have access to education. Having family responsibilities and having to work to provide for their families makes it hard to be able to access education in this country as well.

Language barriers majority of daycare providers primarily language is Spanish and English is their second language. Some daycare providers are not able to read or write in Spanish and others may not be able to read, write or even speak English. "Second language learners vary greatly in their ability to master a second language. Individual differences, such as age, aptitude, motivation, prior language-learning experience, learning styles, beliefs, culture, gender and self-direction can affect likelihood of success" (Hardison, 2012)".

Learning styles 60% of adults in the U.S with literacy problems have undetected or untreated learning disabilities".(ILA 2021). Each individual has different learning styles. Some daycare providers might be visual learners who need to see simple, easy-to-process diagrams or the written world. Like powerpoint presentations and flip chart graphics are very helpful to these learners. Audial learners need to hear something so that it can be processed. They might prefer to read aloud it presented with written material. They enjoy lecture format learning. Print learners process information by writing it down. They take a lot of notes that they may never look at again. Tactile learners need to do something in order to learn it. They are likely to avoid written instruction and dive right into hands-on attempts to work it out. Interactive learners need to discuss learning concepts. Breakout discussion question and answers formats support this type

of learning. Kinesthetic learners learn through movement. Training exercise and role plays help. Giving people the flexibility to stand and move about the classroom also helps these learners.

Consequences

Less Opportunities. It diminishes the daycare providers chances to compete in today's labor market and command a living wage. They would lose financial support from the agency, a repayment of up to \$6,000 a year. If the daycare provider is not able to pass the training, they are disqualified from getting the financial help from the agency. This can affect their participation in the programs as it is one of the requirements to continue to get sponsored from the agency. If the daycare provider is not able to pass the training, they are disqualified from getting the financial help from the agency.

Not being able to understand new regulations. To understand the new regulation on the training, this can be a challenge if the grammar usage is written in a higher level literature with formation concepts, problem solving, questioning, analytical thinking and application of the connection that is presented to them on the annual training. Daycare providers are having difficulty understanding the new regulations of the USDA annual training and it prevents them from knowing how to apply the new regulations. Some daycare providers are able to pass the quiz, but they are not appropriately applying the new regulation to their daycares and as such are still not compliant with the CACF program. Understanding and applying the new regulations the daycare providers face obstacles of not being able to implement appropriately.

Not being able to navigate the online training. The research indicates that adults tend to make more mistakes in completing given tasks with digital devices. “ (Wolfson, 2014). Older adults struggle with technology. Encountering challenges when trying to complete or access information online. This affects their daycares because one of the requirements the agency has is to send one agency member to check how the provider is implementing the new regulations. If the agency member sees that the daycare provider is not implementing the regulations correctly, the agency might ask the daycare provider to retake the annual training again to make sure they are following the new regulations correctly. This can delay a meal payment for the daycare provider and cause frustration on having to retake the annual training or discouragement on participating in the program. Daycare providers need to complete their training online and it is difficult for them.

Problem Model

Contributing Factors	Problem	Consequences
Access to Education	Technology Illiteracy, and lack of access to online training, and understanding the material to apply it in	Less opportunities
Language Barriers		Not being able to understand New regulations

Learning Styles	daycares. Ultimate not passing their annual trainings	Not been able to navigate the online training
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Capstone Project Description and Justification

Capstone Project

The capstone project is to make the annual trainings easier to navigate for the daycare providers, making the training more user friendly, adding a link to access from any electronic devices that would take them straight to their annual training, adding voice over slides in English and Spanish explaining the training content, have a comprehensive quiz after a set of slides ensuring that daycare providers are comprehending the concepts from the training.

Project Purpose

The project purpose is to have more daycare providers able to access the training, pass the training successfully, and implement the new regulations to their daycare properly. When a worker from CACFP shows up in their daycare, they are able to explain the new regulations and are able to implement them to their daycare center without a problem. We must advocate for those daycare providers and those who need to enroll in adult school to attain their education and become fully literate. Daycare providers are smart individuals that need a lending hand in order to overcome their disadvantages. If we can close the gap of education, we can close some of the gaps for language barriers and technology illiteracy. Additionally, keeping more daycare centers open and available to families that need the services would be greatly beneficial to the families that need the services and the children that depend on these centers to get healthy meals that

benefit them by providing a healthy balanced diet getting the essential vitamins, minerals and the nutrients needed for a healthy growth and development for children.

Project Justification

Delivering technology to older adults can be challenging especially if there's a language barrier. Adults learn differently from younger people through technology and any new information must be designed to their needs in order for them to understand and be engaged in the new material presented. Research has shown that “adults experience a series of psychological, cognitive, and psychomotor changes, which must be attended to in training design to their needs and styles of learning. Getting technology based instructions that is highly structured, providing feedback and adaptive guidance, including metacognitive prompts, incorporating principles derived from cognitive load theory and consigne theory of multimedia learning” (Hardison, 2012). Adult learning changes as we get older to help daycare providers with those changes. The technology that would be incorporated in the training would be designed to navigate and understand the concepts making it easier to their annual training.

Project Implementation

The project implementations are to integrate over Google Slides this creates more engagement for the viewers, capturing attention of the viewers and making it more attractive and easier to understand and follow the presentation content. Break down main points it allows the viewers to absorb and analyze the concepts being more manageable to understand. Have a short

quiz after each subject is covered. Quizzes would be presented with a few questions, quiz would offer a couple of tries, offering a longer time frame when taking the quiz. Sending an email with the link directly to daycare providers to access the annual training from their electronic devices.

Assessment Plan

The plan to measure effectiveness by comparing the number of times daycare providers had to retake the quiz on last year's training to the numbers for the training this year. This would show me how successful daycare providers were on last year's training versus this year's training and give an indication of how successful the intervention was.

Expected Outcomes

The project would help the daycare providers access their annual training easier, understand the content of the training and be able to implement the new regulation in their daycares.

Project Results

My project was successful comparing the results from last year 2020 annual training and this year annual training 2021. The success rate of daycares passing the training the first time was extraordinary. My project shows that by adding voice to the slides, breaking down the main points, adding a quiz with a couple of questions and having a link to access the annual training directly to their electronic devices was easier to navigate for the daycare providers. The ultimate

goal was achieved by having the daycare providers pass the annual training 2021 and being able to implement new USDA regulations to their daycares.

Conclusion & Recommendations

What I learned from my project results is that the training in the past was not easy to navigate, the information was too long to comprehend and the quiz was too long. This led towards the end forcing the daycare providers to memorize all the information and causing some struggles. Changing the format of the annual training and the quiz allowed the daycare providers to comprehend and apply the new concepts and pass the quiz. My recommendation to the agency is to try to view things from the perspective of the daycare providers. This will help in making the training or new information easier to access and comprehend in order to have better results for the providers and the agency. In conclusion, collaboration from daycare providers and the agency can have a positive impact on the success of the annual training.

Personal Reflection

What I learned about the problem is that most daycare providers don't have the knowledge of how technology works and some have difficulty understanding the new implementations needed to apply in their daycares due to language barriers. The planning was challenging because I had to find a new program that would have all the elements to present the annual training to the daycare providers. The other challenge was the implementations, finding what would be more effective and beneficial to the daycare providers. The project helped the

agency address the problems that the daycare providers were having to easily access the annual training, pass the quiz and understand and apply new regulations.

The strengths of the project was a link created to access the annual project, voice over slides to follow information, break down concepts, shorter quizzes, and more tries to take quizzes. The limitations were that the project had zero budget and the challenge was finding a program that would offer all elements needed for the annual training. A lot of research was done in order to find the program that was needed for the project. Initially it was trial and error until I found the program that would work.

The broader social problem in this project was technology illiteracy and language barriers among daycare providers. Most of the daycare providers come from humble backgrounds; not finishing school in their native country and having to learn a new language. Navigating new regulations is challenging for them. The project addresses some of the technology problems by sending a link to their email to click on it and take them directly to the annual training. Added voice over slides will help assist with some of the language barriers.

The social problem of technology illiteracy and language barriers can be addressed through hands-on training on a computer and training in their native language with words that are used on a daily basis.

My advice for future capstone students working in this agency would be to offer free technology classes to daycare providers in their native language. Help them navigate an electronic device such as to take photos, send text messages and emails. But most importantly, assist daycare providers with accessing the annual training..

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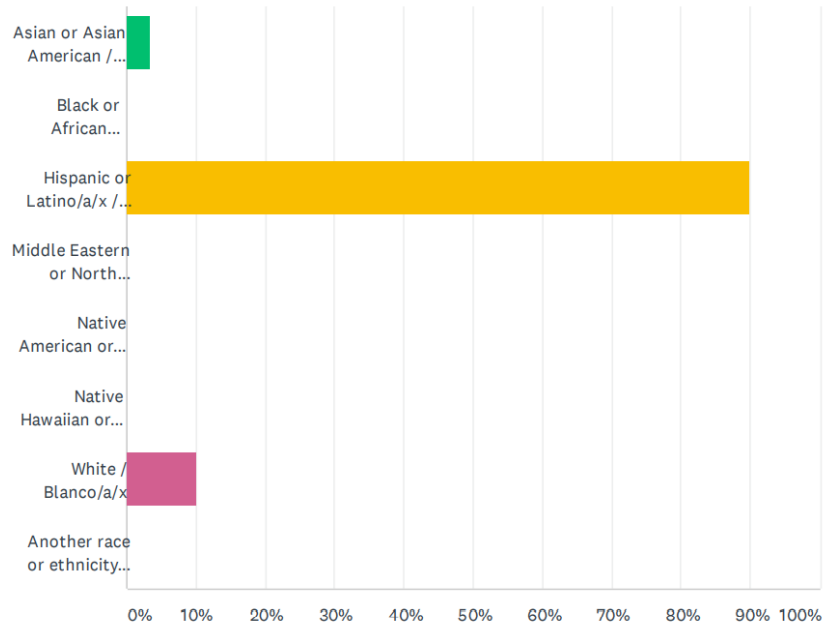
Appendix A

Scope of Work

Activities	Deliverables	Timeline/Deadlines	Supporting Staff
Annual Trainings	Review previous years annual trainings/survey of the trainings	Two Months	Erika Rodriguez
Review last year's annual trainings	Existing quizzes on annual trainings	Three Months	Erika Rodriguez
Develop new quizzes for annual trainings	First quizzes adapting format to what works better for the purpose of the annual trainings	One Month	Erika Rodriguez
Review quizzes for annuals	Make adjustments or changes as needed	Two Months	Erika Rodriguez

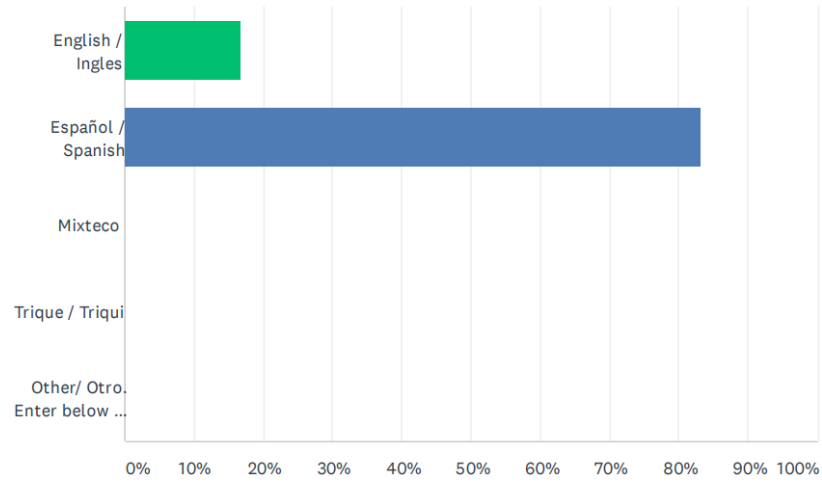
Q46 Race/Ethnicity: How do you identify? (Check all that apply) / Raza / Etnia: ¿Cómo se identifica? (Marque todo lo que corresponda)

Answered: 30 Skipped: 696



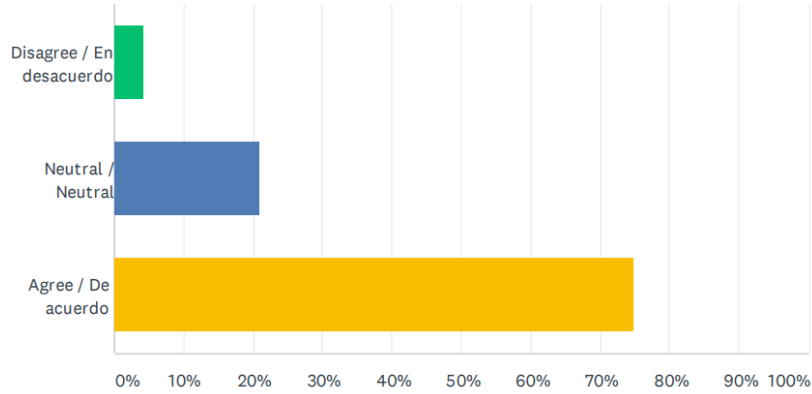
Q47 My primary language is: / Mi lenguaje principal es:

Answered: 30 Skipped: 696



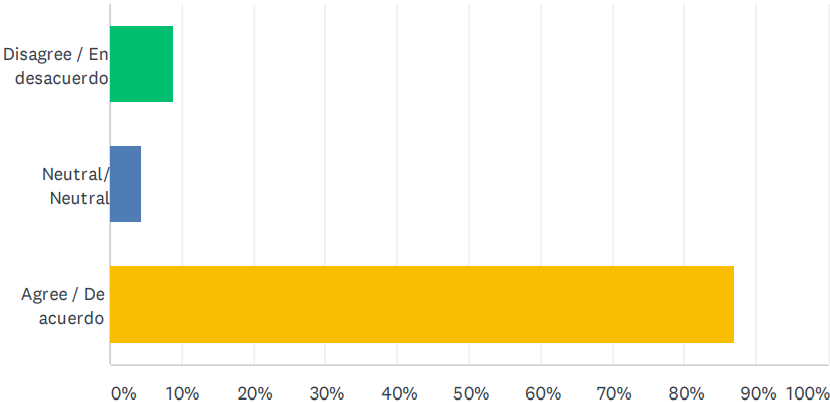
Q51 I have received or am receiving adequate training to participate in the Child & Adult Care Food Program / He recibido o estoy recibiendo entrenamiento adecuada para participar en el Programa de Comida de Niño's y Adultos

Answered: 24 Skipped: 702



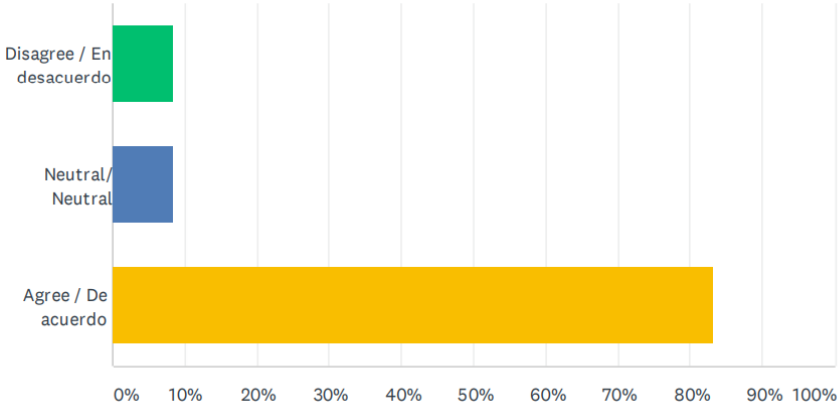
Q52 The mandatory online training was organized and easy to follow / El entrenamiento anual en línea estuvo bien organizada y fue fácil de seguir

Answered: 23 Skipped: 703



Q53 I am given useful information and materials during the annual training / Me dan información y materiales útiles durante en entrenamiento anual

Answered: 24 Skipped: 702



Q54 What did you like or dislike about the online training this year? / ¿Qué le gustó o no le gustó del entrenamiento en línea de este año?

Answered: 21 Skipped: 705

#	RESPONSES	DATE
1	Me gusto que todo está muy bien explicado	9/26/2021 10:28 AM
2	it being on line . i'm not good at the computer.	9/20/2021 9:39 AM
3	Todo megusto	9/16/2021 1:09 PM
4	perfecto, muy bien muy entendible	9/14/2021 2:46 PM
5	Me gusto estuvo facil.Lo que no me gusto es que no dieron en certificado de prueba que si se completo.	9/13/2021 11:28 PM
6	Me gusto porque me corregio mis errores y fue mas fácil pasar el quiz. Muchas gracias ☺	9/13/2021 7:55 PM
7	Muy difícil y demasiadas preguntas	9/10/2021 8:54 PM
8	megusto kefueron mui amables y trataron de orientarme mucho	9/9/2021 6:50 PM
9	Mucho mejor que el anio pasado, esta vez fue de 2 horas y 30 minutos la lectura para mi, pero fue mucho mejor el desarrollo del examen... bien hecho y me gusto que teniamos la opcion de corregir nuestra primer respuesta... gracias	9/8/2021 3:41 PM
10	Me encanto, fue útil y muy facil	9/8/2021 3:04 PM
11	Todo está bien	9/5/2021 4:16 PM
12	Que fue mucho más fácil muchas gracias	9/3/2021 3:53 PM
13	Todo estuvo bien	9/1/2021 7:11 AM
14	Me gusto mucho, fue mas explicado este año.	9/1/2021 8:09 AM
15	I liked that it was well coordinated	8/31/2021 9:02 PM
16	Los consejos	8/31/2021 3:06 PM
17	Estuvo perfecto y más seguro por lo del covid 19...así no tenemos q juntarnos todos y se m hizo mucho más seguro.	8/31/2021 1:31 PM
18	Muy entendida la información	8/31/2021 12:15 AM
19	Todo bien	8/30/2021 11:08 PM
20	to much pages to print	8/30/2021 3:58 PM
21	I like because I can see it in line, in my house, but I miss the participation, and hear another questions.	8/30/2021 9:56 AM

Q55 What can we do to improve the online training? / ¿Qué podemos hacer para mejorar el entrenamiento en línea?

Answered: 20 Skipped: 706

#	RESPONSES	DATE
1	Yo lo encuentro perfecto	9/26/2021 10:28 AM
2	Me gusta como esta	9/16/2021 1:09 PM
3	todo muy bien	9/14/2021 2:46 PM
4	Dar verificacion de examen completado.	9/13/2021 11:28 PM
5	Todo estuvo excelente	9/13/2021 7:55 PM
6	Más fácil	9/10/2021 8:54 PM
7	pues pienso kenada yomesenti un poco nerviosa pero mui segura dekeiva aprender algo nuevo	9/9/2021 6:50 PM
8	Por ahora estuvo bien.	9/8/2021 3:41 PM
9	Nada	9/8/2021 3:04 PM
10	Todo está bien	9/5/2021 4:16 PM
11	Todo esta perfecto	9/3/2021 3:53 PM
12	Nada todo estuvo bien	9/3/2021 7:14 AM
13	Toda la información fue muy buena, me gusto esta vez.	9/1/2021 8:09 AM
14	No answer	8/31/2021 9:02 PM