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# INFORMATION SYSTEMS EDUCATION JOURNAL

## Editor Comment:

We are pleased to present our first issue of 2024, including papers on AI in and out of the classroom. We are also delighted to welcome Dr. Kevin Mentzer to the editorial team this year, joining Dr. Dana Schwieger as Associate Editor, along with Drs. Ira Goldstein and Michelle Louch as Cases & Exercises Co-Editors. Thank you to each of these individuals, to our reviewers, and to our Publisher, Dr. Tom Janicki.

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# A Pragmatic Approach to Investigating the Digital Existence of Food Bank Users

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## Abstract

This study investigated the digital existence of the food bank users in a university town in Texas, and subsequently, aligned with the research's pragmatic focus, the researchers designed a training model for these food bank users. Two research questions guided the study: What are the digital existence levels of the food bank users, and what training model would best serve these food bank users? Data were collected by means of a survey from 230 individual food bank users representing households. Additional data included observations and conversations with food bank staff, and documents and materials from the site which provided deeper insights. The study found that the food bank users 1) had little to no broadband connectivity; 2) possessed limited digital devices which revealed significant barriers to their digital existence; and 3) had feelings of desperation, vulnerability and isolation. Regarding training offered at no cost, the food bank users did not show much interest, which was attributed to the food bank users' insufficient digital knowledge. The three-level training model was designed with the following objectives: 1) Prepare participants for training; 2) introduce the concept of *digital*; and 3) teach basic computing and cybersecurity skills. To implement this training, an interactive learner-centric model was created demonstrating collaboration among university instructors, volunteer students and the food bank staff. The study concluded that to exist in digital societies affordable broadband connectivity, needs-based devices, and continual support and training were needed for such underserved groups.

**Keywords:** digital existence, underserved populations, training model, computing skills, cybersecurity, food insecure

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# A Pragmatic Approach to Investigating the Digital Existence of Food Bank Users

## 1. INTRODUCTION

Digital technologies dictate that organizations, public and private, become *technology takers*, defined as “assent to the behavior transforming benefits of modern technologies” (Flanding, Grabman, & Cox, 2019, p. xv). If organizations are unable to adopt and adapt to technological advancements by modifying behaviors (Flanding, Grabman, & Cox), dislocation becomes unavoidable. Similarly, individuals are likely to share the same fate if they are unable to keep pace with technologies.

Today, adopting and adapting to technology is no longer a one-time option but an iterative process which makes the “keeping up with the technology” process challenging, particularly for underserved populations with limited digital tools. As the gap between the digital haves and have nots continues to widen, the have nots are left to fend for their existence, often times waiting for a *warm expert* (Bakardjieva, 2005), a non-professional assisting the digitally poor, to come to their aid. In fact, not too long ago, the COVID-19 pandemic demonstrated how debilitating it was when left with little to no technology and no help. The pandemic lockdowns not only isolated people physically and mentally but also exacerbated the challenges faced by those with limited digital resources, causing additional distress. Added to the digital stress was yet another level of concern: To be able to survive as a human being by overcoming hunger and food scarcity.

Following the digital crisis of the pandemic, despite government plans in *broadband policy universal* and *universal access and service (UAS)* to be achieved by 2025, “the number of economies with a broadband plan has slightly decreased over the past year as plans have expired and haven’t been renewed in some countries” (Broadband Commission for Sustainable Development, 2022, p. 20). These changes of plans result in limiting the underserved individuals’ access to essential areas such as public services, education, employment, and citizenry (Broadband Commission for Sustainable Development; National Digital Inclusion Alliance [NDIA], 2023).

In addition, the issue of cybersecurity has also become more critical than ever no matter what

the economic status of an individual is. In the case of the digitally poor, because “home computer systems are largely administered by end-users with little security knowledge” (Zang-Kennedy, Chiasson, & Biddle, 2016, p. 1), additional liabilities leave the socially underserved defenseless. In a survey taken by the underserved populations in the city and county of San Francisco found that “a large number of respondents were unable to comment on cybercrime impact because they did not understand basic cybersecurity concepts” (Sultan, 2023, p. 5).

### The Significance of the Research

The significance of this research derived from two interrelated problems. First, an underserved group, food bank users, were experiencing hunger and food scarcity with unpredictable consequences. Second, left on their own, their “inability to interact with the online world fully, when where and how an individual needs to” (Digital Poverty Alliance, 2023, para.1) created obstacles for their existence.

At the time of this study, while many studies were available on topics such as digital divides, digital have and have nots, digitizing food banks, or how to train elderly in technologies, there was no research on food bank users and their digital situation inclusive of designing a pilot training model. This study aimed to fill this gap.

Based on the research problem, a food bank in a Texan town located near a research university was identified as the research site. The proximity was critical due to the training implementation plan which required the participation of instructors, students and food bank staff.

Further, because of the pragmatic focus of the study (Patton, 2015), it was important to understand the digital barriers of the food insecure to be able to develop a pilot training model with an implementation plan.

In this study, the United States Department of Homeland Security (2023), FEMA description of *underserved populations and communities* was utilized:

People who are socioeconomically disadvantaged; people with limited English proficiency; geographically isolated or

educationally disenfranchised people; people of color as well as those of ethnic and national origin minorities; women and children; individuals with disabilities and others with access and functional needs; and seniors. (para, 1)

## 2. LITERATURE REVIEW

According to the 2021 UNESCO Science Report, "digital technologies are transforming society as we know it. This rapid upheaval has been termed the Fourth Industrial Revolution (or Industry 4.0)" (para. 2). While the world is "investing heavily in the digital economy" (UNESCO, 2023, para.10), there are organizations which are unable to adopt these technologies let alone adapt their behaviors to these changes. There are also minority groups who are left to survive on their own. One of the groups is the food insecure who not only experience hunger and food scarcity but also unpredictable consequences of such scarcity. When these individuals experience *digital poverty* (Digital Poverty Alliance, 2023), it also impacts their existing economic poverty. Unable to keep pace with the technological advances, they are affected in countless ways and unless the problem is taken care of, they continue to remain in poverty.

### Digital Existence

There is no doubt that digital societies and modern economies depend on digitally competent citizens. Digital inclusion requires having affordable broadband connectivity, digital devices based on needs, access to technical support and training (NDIA, 2023). At present, the problems of affordable connectivity and basic computing skills for all citizens still continue to be a hindrance and still continue to be minimized or at best ignored, generating a new form of discrimination (Dalat Ward & Ar, 2023; George, Dalat Ward, & Jones, 2022).

While the issue of digital divide should be treated as an emergency by government change leaders, many proposals include long-term plans and do not go beyond future-oriented recommendations rather than urgent actions (Dalat Ward & Ar, 2023). One example is the 2021 the *American Jobs Plan* "a new infrastructure bill...\$2 trillion over the next eight years...Part of the spending proposed in the bill is to go toward expanding broadband internet access" (Ross, 2021, p. 1). Another example is a recently reported NDIA plan: "Over 220 organizations around the country will soon have access to over \$73 million in dedicated funds to help support outreach and

enrollment in the Affordable Connectivity Program (ACP)" (Tesfaye, 2023, para. 1).

There is also a great concern when it comes to issues related to digital inequity and digital divide. These issues are considered a violation of human rights as declared by the United Nations General Assembly Human Rights Council: "*Emphasizing* that access to information on the Internet facilitates vast opportunities for affordable and inclusive education globally, thereby being an important tool to facilitate the promotion of the right to education, while underlining the need to address digital literacy and the digital divide, as it affects the enjoyment of the right to education..." (United Nations, 2016, p. 2). Reviewing the human rights issue from the *pyramid of digital needs* (Mheir, 2017) aspect, it is easy to see how digitally neglected the underserved populations are. Made up of five layers, and similar to *Maslow's Hierarchy of Needs* (Maslow, 2008), the needs range from basic digital needs (the bottom of the pyramid) to self-actualization (the tip of the pyramid). While the digitally privileged individuals, employed or not, are able to meet their digital needs with ease and move up the pyramid easily, the *digital have nots* are mostly bound to remain at the bottom layer of the pyramid unable to meet their basic digital needs such as "editing a document on a word processor, browsing the web, making a phone call...taking a digital picture or getting driving directions from...GPS" (Mheir, para. 1). It is critical that these needs be addressed so individuals can digitally exist effectively and efficiently and make the progress they want as citizens.

### Food Insecurity

Digital divide impacts numerous underserved groups who also experience hunger and food insecurity. It is important to distinguish between the terms *hunger* and *food insecurity*.

According to the United States Department of Agriculture (USDA) Economic Research Service (2023) *hunger* and *food insecurity* are closely related, and while "hunger refers to a personal, physical sensation of discomfort, food insecurity refers to a lack of available financial resources for food at the level of the household" (para. 1). The food insecure are people whose "access to adequate food for active, healthy living is limited by lack of money and other resources" (USDA Economic Research Service, 2023, para.1). Similar descriptions are provided by the Food and Agriculture Organization (FAO) of the United Nations (2023) "while many people may not be 'hungry' in the sense that they are suffering physical discomfort caused by a severe lack of

dietary energy, they may still be food insecure” and stresses the goal of making it imperative that “no one suffers from hunger” (para. 1).

Such insecurity can be incapacitating showing a myriad of effects on households and individuals in “coping mechanisms — such as choosing between paying for food and health care, or food and utilities” (Feeding Texas, 2023, para. 3). The alarming message is that personal food insecurity can lead to “damage to cognitive abilities and interference with growth in children and disease management in adults” (Feeding Texas, para. 3). Based on an individual’s economic instability, individuals can move in and out of food insecurity which could cause additional levels of stress and trauma.

Coupled with hunger and unpredictability, trying to adopt and adapt to technological advancements can have debilitating effects leading to further isolation. When food insecure individuals are in a survivability mode, tackling unpredictability and economic instability, their adaptation to technologies cannot be their priority. Their concerns are to feed their family member(s) and deal with the stress that comes with the hunger. In fact, based on the 2021 USDA Economic Research Service data “10.2 percent of households were food insecure at least some time during the year, including 3.8 percent (5.1 million households) that had very low food security” (para. 2).

Regarding the general food insecurity in Texas, according to Feeding Texas (2023) data, “13% of Texas households — 1 in 8 Texans — experience food insecurity. That’s 1.4 million Texas households and nearly 4 million individuals. Texas is one of just 9 states with higher food insecurity than the national average” (para. 1). Regarding children and elderly, these data reveal that 20% of household children experience hunger, 1 in 4 African American household children go hungry, 11% of households with seniors are food insecure. Moreover, rural communities are hit hard as well.

### 3. METHODOLOGY

This study had a pragmatic approach “to seek practical and useful answers that can solve, or at least provide direction in addressing concrete problems” (Patton, 2015, p. 152). The purpose was to investigate the digital existence of the food bank users in Texas and with a focus on “practical consequences and useful applications” (Patton, p. 152), design a pilot training model with an implementation plan.

The two core inquiry questions were: 1) What are the digital existence levels of the food bank users in Texas; and 2) What pilot training model would best serve these food bank users?

#### Research Site

First, because the purpose was to understand the digital existence of the food bank users, *purposeful sampling* (Creswell & Guetterman, 2019) was used. For this research, the criterion to identify participants was to identify groups who were food insecure. These groups were identified in a community food bank in a university town in Texas situated near a research university. One of the researchers was working at the nearby university which made it convenient for the study.

The food bank’s proximity to the university was also critical. The food bank had just moved to a newly located site with added services and was open to innovative programs. Since implementing the training would require instructors and students to collaborate with the community bank, it would make it more convenient for the instructors and students to visit the bank.

The eligibility criteria for identifying this particular food bank included 1) the staff being able to work with the researchers and discuss the general demographics of the food bank users without revealing their identities; 2) being able to distribute a survey to the food bank users; 3) being open to holding training sessions with the help of instructors, volunteer students and food bank staff; 4) having a dedicated physical space in the food bank for training; and 5) having at least 10 computers to be used for training. Once the food bank was confirmed for appropriateness and accessibility, permission was obtained for the study.

The town where the foodbank and university were located, had a population of 45, 941 according to the 2020 Decennial Census (United States Census Bureau, 2023). The two largest employers of the town were 1) the Texas Department of Criminal Justice with 4, 372 employees; and 2) the university with 2, 417 employees. It is important to note that many of the food bank users were unable to find well-paid jobs due to their low levels of education and lack of digital skills.

#### Population

The individuals using the food bank services were considered *food insecure* (FAO of the United Nations, 2023), defined as part of a socioeconomically disadvantaged group fighting hunger and food scarcity.

All food bank users were required to register prior to receiving services and the director had access to their information. The director provided the researchers with general information on the demographics of the food bank users without revealing their identities. One insight was that the food bank users were economically and socially disadvantaged and appeared to be digitally poor, “the inability to interact with the online world fully, when where and how an individual needs to” (Digital Poverty Alliance, 2023, para. 3.).

Because the town had seven prison units (minimum and maximum security), the researchers were informed by the food bank staff that many of the food bank users had an incarcerated family member or two serving time in one of the units (Huntsville City Gov.,2023).

### Data Collection

First, a survey was developed to collect both numerical and textual data to investigate the digital existence of the food bank users. In addition to the survey, the principal researcher was able to visit the site multiple times and gain deeper understanding by means of observations, conversations, documents and audiovisual materials. Finally, based on these data, a training model was developed.

**Survey:** A paper survey (Appendix A) was developed by the researchers and consisted of three sections. The aim of the survey was to collect data on the digital existence of the food bank users as well as identify their training needs which would answer the two core questions: 1) What are the digital existence levels of the food users in Texas and what can be learned? 2) What training model would best serve these food bank users?

The first two sections of the survey were made up of checklists and the third section, entitled, “other,” required textual responses. The reason for using checklists for the survey was for the participants to respond with ease and to be able to increase the return rate of the survey.

The first section asked individuals to report the number of digital devices in their households including television, cellular phone, desktop computer, laptop computer, tablet and printer, and access to the Internet.

The second section listed the training opportunities offered at no cost for both adults and children at the foodbank site. This section entailed marking the opportunities which they needed and/or wanted depending on their

household needs. For adults, the following opportunities were listed on the survey: 1) *Computing Fundamental Workshop: Emailing, Microsoft Office Suite (Word, Excel, PowerPoint);* and 2) *Don't Be a Cybersecurity Victim;* 3) *Save money – Building a Computer.* For children, the opportunities were as follows:1) *Building a Robot;* 2) *Flying a Drone;* and 3) *Be a Cybersecurity Investigator!*

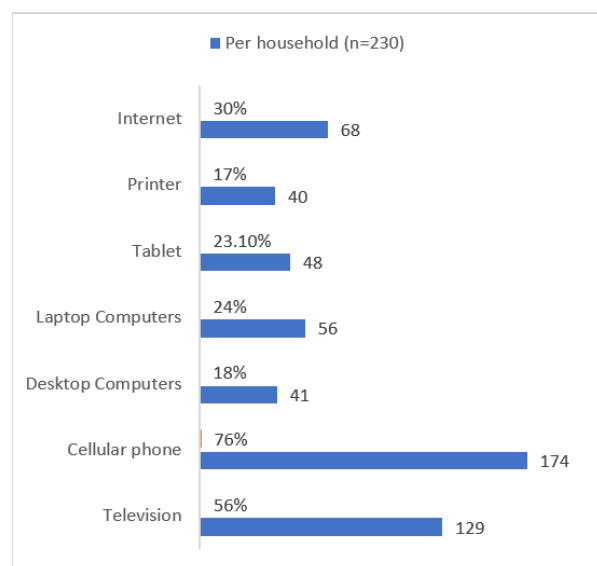
The third section of the survey, “other,” was left blank for participants to fill out – whatever they wanted to share and convey.

**Additional Data:** Additional data collection was made up of observations (field notes), conversations (the food bank director, staff), documents (notes from electronic exchanges and meetings), audiovisual materials (photographs, videos from the site, newspaper clippings) (Creswell & Guetterman, 2019).

## 4. FINDINGS

### Survey

A total of 230 individuals representing households completed the survey. Based on the responses, 76% households had cellular phones; 56% owned televisions; 18% had desktop computers; 24% had laptop computers; 21% had tablets; 17% had printers in their homes; and finally, 30% of households had Internet connectivity (Table 1). It was noteworthy that all households surveyed had access to at least one of the listed devices.

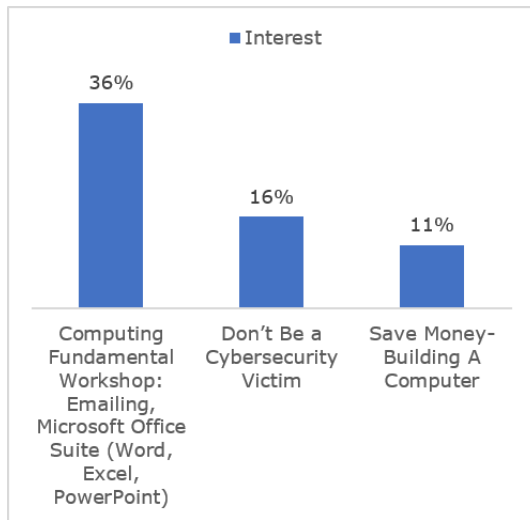


**Table 1. Devices / Access per Household**

The second section of the survey revealed significantly low interest levels in training for both

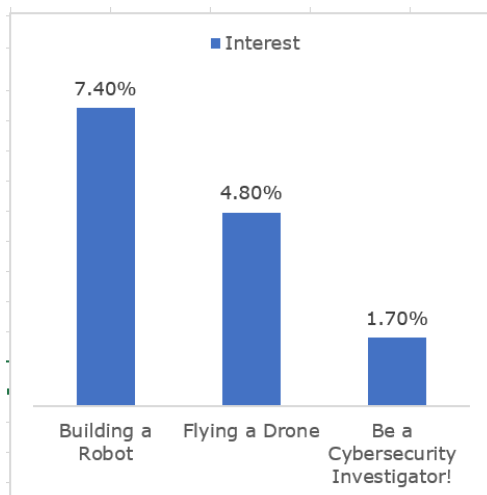


adults and children. Data revealed that 36% individuals expressed interest in a session entitled *Computing Fundamental Workshop: Emailing, Microsoft Office Suite (Word, Excel, PowerPoint)*; 16% were interested in a session entitled *Don't Be a Cybersecurity Victim*; and 11% were interested in a session entitled *Save Money-Building A Computer* (Table 3). The low interest levels in training opportunities were attributed to limited levels of digital knowledge and the concept of digital.



**Table 2.** Adult Training Interest

The adults responding on behalf of their children indicated that only 7.4% of their children were interested in a session entitled *Building a Robot*; 4.8% were interested in *Flying a Drone*; and 1.7% were interested in a session entitled *Be a Cybersecurity Investigator!* (Table 4). Low interest levels in the training opportunities were attributed to participants' limited levels of digital knowledge.



**Table 3.** Children Training Interest

In the "other" section of the survey, in which participants revealed their thoughts, a total of 32 responses were received. Knowing the context in which these words appeared, working independently, each researcher used the *key-word-in-context* (KWIC) method which "entailed locating all occurrences of particular word or phrases in the text" (Guest, MacQueen, & Namey, 2012, p. 10). These responses were *less structured elicited free-flowing texts* (Guest, MacQueen, & Namey). In a way these words and phrases were similar to a telegraphic speech used by children acquiring their first language described as: "...a concise message characterized by the use of three-word short phrases or sentences made up of main content words such as nouns and verbs and void of function words and grammatical morphemes" (Gabig, 2013, p. 2076).

To secure reliability, once the researchers completed their individual analysis, they used the *member checking* (Creswell & Guetterman, 2019) technique to discuss and confirm their individual thematic analysis. Based on the consensus, the researchers agreed on three groups of emotions including desperation, vulnerability, isolation. The researchers also agreed that these responses were symptoms of hopelessness and revealed warning signs, describing a threatening situation (Frijda, 1986).

**Additional Data**

One of the researchers was able to observe the site and the food bank users. The site was new and was open to innovations. The site also had a room with computers (donated by a tech company) and could be used for training. Based on the conversations at the research site, the researcher was able to gain a deeper understanding of the food bank. Although not planned, one of the researchers was also able to talk to a few food bank users who confirmed the desperate situation. As young families, they mentioned their frustration and hardship of not having access to the Internet and not being able to afford the devices their families needed. Additionally, the conversations gave information on the modus operandi of the organization, their new location, their services and their concerns. Furthermore, phone calls and emails with the food bank director all confirmed the digital poverty levels of the food bank users and the necessity of training. The local newspaper also covered the training plan in collaboration with the university and published an article with the following headlines, *Local food bank finds new*

location, services” (Mullins, 2023). This researcher also prepared a video recording of the training room with 12 computers connected to a network.

These additional data further guided the design of the training model. Rather than directly starting with basic computing and cyber security skills, it became clear that preparing the individuals mentally and motivating them was critical for their readiness.

### 5. TRAINING MODEL

Subsequently, acting on the practical value of the research, a three-level training model (Table 4) was designed to serve the food bank users. This model would be piloted and consequently, improvements would be made so that it would serve as a sustainable training model for this food bank and be shared with other food banks. This goal was also supported by one of the United Nations Sustainable Development Goals (SDGs), “Goal 4: Quality Education. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (United Nations, Department of Economic and Social Affairs, 2023, para 1).

Sessions	Training Topics + Duration
Session 1 <b>Engaging</b> - preparing the participants for readiness	Profile information + Needs Value-focused thinking Motivational beliefs and emotions Behavioral changes (minimum 4 hours)
Session 2 <b>Framing</b> - the meaning of digital	Digital terminology Digital needs (minimum 5 hours)
Session 3 <b>Shifting</b> - adopting and adapting to technology	Basic computing (Microsoft Suites) Cybercrime /cybersecurity (minimum 15 hours)

**Table 4.** Training Model for Food Bank Users

The first level of the training model would prepare the participants for the training and was entitled “Engaging.” The goal was to prepare the participants to adopt and adapt to technologies (Flanding, Grabman, & Cox, 2019). At this level, the participants would be encouraged to know the reasons for the training so they could “jump in enthusiastically” (Place, 2018, para. 4) and become intrinsically motivated rather than be obligated to attend in order to receive food

services. The aim of this level was to cover profile information, personal needs, *value-focused thinking* (Keeney, 1992, p. 5), *motivational beliefs and emotion* (Boekaerts, 2010), and *behavioral changes* (Schöner & Kelso, 1988). Behavior changes were particularly critical in the context of adapting to technologies.

The second level of training was entitled “Framing” and entailed understanding the concept of “digital” including digital terminology and digital needs. The aim was to bring awareness to the digital existence levels of the participants. This would enable them to understand their digital existence and to identify their needs.

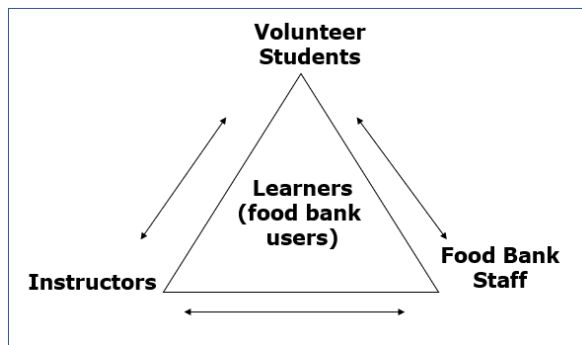
The third level of training was entitled “Shifting” and intended to cover the basic computer skills together with the meaning of cybercrime and cybersecurity. It was important to make participants aware of cyber-crimes and develop their cyber security skills to protect them and their family members. Giving them the confidence was fundamental. According to Ahmad Sultan (2023) “Research and government intervention efforts aimed at improving online security have not effectively reached underserved populations” (p. 23). The report stressed an important point regarding the underserved populations who “suffer from poor cybersecurity outcomes, including being victimized by cyber-scams and avoiding the use of online services due to the threat of cybercrime (p. 23).

Moreover, the training would also offer the option of building computers since building one’s computer is “often cheaper than buying a readymade one, because you can focus on the features you do need and leave out the ones that you don’t” (Nield, 2023, para. 2). In addition, research indicates that there is an *educational value* in putting together a computer as confirmed by Nield “Spending time putting together has the added benefit of giving you a great insight into the inner workings of a PC -- by the time you’ve finished, you’ll know the purpose of each internal component and how they all fit together through the motherboard” (para. 4).

The training model would be based on face-to-face sessions and stretched out to four to five days to give the participants ample time to digest new knowledge and make sense of their repeated firsthand experiences. There was no budget planned for the training as services were all donated.

### The Implementation Plan

The implementation plan was based on an interactive learner-centric model (Figure 1) developed by the researchers. The model showed a partnership between instructors and students from the nearby research university and the food bank staff. The model was based on collaboration and encouraged all three groups to work towards concentrating on social injustice issues related to the food bank users. The food bank users were located in the center of the implementation model as the focus of the training. Instructors, volunteer students, and food bank staff were located as service providers continually collaborating with each other.



**Figure 1.** Interactive Learner-centric Model

For the instructors, this training would serve as a community service, as part of the academic tripartite model including teaching, scholarship, and service. For students, it would be part of their service learning (SL) defined as “a vehicle for connecting students and institutions to their communities and the larger social good, while at the same time instilling in students the values of community and social responsibility” (Neururer & Rhoads, 1998, p. 321).

The role of the instructors would be to train and coach the students and supervise their training. They would also provide feedback and guidance to the food bank staff. Student who wanted to volunteer would be open to various majors such as Computer Science, Informatics, Counseling, Education, Psychology, Social Work, Sociology and other related fields. As service providers, students would conduct the training, act as coaches to the participants as well as serve as go-to-persons. The third group in the interactive model was the food bank staff who would continually liaise with the instructors and students. Additionally, they would oversee SL activities.

Training volunteer students for their roles was also fundamental. This would provide students

with an awareness of the context, for authentic relationships, and for active learning conversations (ALCs), defined as “an approach to working with and developing people that uses work on an actual project or problem and learn how to learn from their action” (Yorks, O’Neil, & Marsick, 1999, p. 3). Moreover, a community activity such as this one would promote change for students defined as *transformative learning* (Mezirow & Taylor, and Associates, 2009): “an approach to teaching based on promoting change, where educators challenge learners to critically question and the integrity of their deeply held assumptions about how they relate to the world around them” (p. ix).

Training students would include the following learning objectives: 1) understand service learning, active learning and transformative learning, 2) discover self-awareness, 3) develop intercultural communication, 4) explain and analyze the culture of food insecure, 5) recognize and develop cognitive and affective empathy, and 6) understand “mind, brain, education” (Tokuhama-Espinosa, 2010).

Following training, upon measuring the impact and discussing the consequences, the long-term goal would be to sustain an active training program; maintain collaboration between the university and the community by means of community service and service learning. This goal would also help support the United Nations *Sustainable Development Goal 4: Quality Education* (United Nations, Department of Economic and Social Affairs, 2023).

**Authors’ Note:** After this paper was submitted for review, one of the authors conducted a pilot session to train three participants at the site of the food bank. Two students served as trainers and one author who was the instructor served as their guide and mentor. The session aimed to assess the effectiveness and reception of the training approach. Feedback from the attendees indicated that the session was an eye-opener, significantly boosting morale and instilling a sense of hope. Following this positive response, the authors are planning to proceed with the full training implementation in the near future. Furthermore, based on this experience, the authors will be writing a paper to document and share insights gained from the full training implementation.

### The Training Site

The food bank would serve as the training site for both the students and the food bank users. For the food bank users, it was convenient to have

the training in the same building where they received services.

For the volunteer students, based on SL, it was essential to work in a real-life setting away from their classrooms. An active participation in such an environment would help students make more sense of their actions, promoting reflections.

Because the training room had 12 computers (Figure 2), it was essential to start with small groups, cohorts of 12. Small groups would allow the trainers to encourage more interactions and attend closely to the needs of the participants.



**Figure 2.** Partial View/Training Site

## 6. CONCLUSIONS

This study highlighted the importance of bridging the digital divide and ensuring that all underserved individuals, regardless of their location and situation have equal access to technological resources and opportunities. It acknowledged that technological progress should not exacerbate existing disparities but should instead strive for inclusivity and equality for all individuals.

First, prior to engaging in this study, while the researchers were aware of the issues related to digital inequity based on previous research, they were taken aback as they did not expect to find barriers to this extent, particularly one major barrier - limited and at times no access to the Internet in households. The implication of this barrier is such that not having access or having limited access to the internet can have unthinkable domino effects on the digital existence of such groups leading to risks in digital societies.

Second, prior to collecting data, the researchers developed a simple list of training opportunities with the assumption that the group could easily select their sessions based on their needs. However, they did not expect to find such low interest levels. This particular finding resulted in another significant implication, highlighting the fact that the participants were not able to select appropriate training as they did not have an awareness of their needs nor understood their gaps based on their close to-non-existent knowledge of advanced technology.

Third, while a few participants were grateful for the opportunities, many used phrases related to negative thoughts and feelings noted in the survey. This was expected due to the participants' ongoing unpredictability battle. However, noting words like isolation, vulnerability, desperation gave a deeper understanding of another level of threat. If a society ignores the well-being of its citizens, including their digital wellness, the results could threaten the wellness of the society as a whole.

To conclude, these findings emphasize the potential risks and challenges to present day digital societies. All recommendations and policy plans proposed by governments during the pandemic need to be urgently reevaluated and expedited as technology continues to advance at an unprecedented pace with no breaks.

## 7. LIMITATIONS

This research was limited to one foodbank in a university town in Texas and therefore, the findings can only be generalized to similar contexts.

## 8. RECOMMENDED RESEARCH

Regarding further research, one recommendation would be to investigate other food banks, locally and globally, and compare findings. Another recommendation would be to investigate how universities could partner and collaborate with food banks to build sustainable training models to support and promote *Sustainable Development Goal 4: Quality Education* (United Nations, Department of Economic and Social Affairs, 2023, para 1).

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## APPENDIX A

### Survey Questionnaire

#### Trinity River Food Bank Technology Household Survey

Would you like to participate **free** workshops? Please check the ones applied to your needs.

- |   |  |
|---|--|
| <input type="checkbox"/> Adults: Computing Fundamental Workshop   | <input type="checkbox"/> Kids: Building a robot                |
| Emailing, Microsoft Office Suits (Word, Excel, PowerPoint...etc.) | <input type="checkbox"/> Kids: Flying a Drone                  |
| <input type="checkbox"/> Adults: Save Money – Build Your Computer | <input type="checkbox"/> Kids: Be a Cybersecurity Investigator |
| <input type="checkbox"/> Adults: Cybersecurity Training           |  |

What time would you be available to attend the workshops?

- |   |   |
|---|---|
| <input type="checkbox"/> Adults: 10:00 AM – 12:00 PM (Weekdays) | <input type="checkbox"/> Kids: 10:00 AM – 12:00 PM (Weekdays) |
| <input type="checkbox"/> Adults: 12:00 – 2:00 PM (Weekdays)     | <input type="checkbox"/> Kids: 12:00 – 2:00 PM (Weekdays)     |
| <input type="checkbox"/> Adults: 4:00 – 6:00 PM (Weekdays)      | <input type="checkbox"/> Kids: 6:00 – 8:00 PM (Weekdays)      |
| <input type="checkbox"/> Adults: 6:00 – 8:00 PM (Weekdays)      | <input type="checkbox"/> Kids: 9:00 AM – 11:50 AM (Saturdays) |
| <input type="checkbox"/> Adults: 9:00 AM – 11:50 AM (Saturdays) | <input type="checkbox"/> Kids: 1:00 PM – 5:00 PM (Saturdays)  |
| <input type="checkbox"/> Adults: 1:00 PM – 5:00 PM (Saturdays)  |   |

What kind of digital devices do you have at your household?

- Smart TV: How many?
- Smart Phone (Cellar Phone): How many?   
    What phone provider do you used? \_\_\_\_\_
- Desktop Computer System: How many?   
    What's the operating system (Windows, Apple, or Linux)? \_\_\_\_\_
- Laptop: How many?   
    What's the operating system (Windows, Apple, or Linux)? \_\_\_\_\_
- Tablet: How many?   
    What's the operating system (Windows, Apple, or Linux)? \_\_\_\_\_
- Printer: How many?
- Internet Router to provide Wifi?
- Others \_\_\_\_\_

How many members do you have in your household? And how old are they?

- 0 - 3 years-old \_\_\_  4 – 6 years-old \_\_\_  7 – 10 years-old \_\_\_  11 – 14 years-old \_\_\_
- 15 – 19 years-old \_\_\_  20 – 25 years-old \_\_\_  26 – 30 years-old \_\_\_  31 – 40 years-old \_\_\_
- 41 – 50 years-old \_\_\_  51 – 60 years-old \_\_\_  61 – 70 years-old \_\_\_  71 and older \_\_\_\_\_

Please provide any comment regarding your technological needs: