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An Impact Study on the Four-Year Computer Skills Training Project in a Philippine Community

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I. INTRODUCTION

The United Nations describes community development as "a process where community members come together to take collective action and generate solutions to common problems," as stated in the UNTERM document. The people will work together aiming to improve their well-being, make positive changes, and create a quality of life and sustainable future in a community. Community development programs involve sustainable practices, responsive to community needs, and have an impact of change that relies on the collaborative efforts of different sectors such as government agencies, nonprofit groups, business entities, and the community members themselves.

From there, a regional network called Human Rights and Development Network Asia (HRNDA) was established that focuses on sustainability development throughout Asia. The program includes (1) protecting and promoting human rights for all individuals, (2) providing training and creating programs to empower the community and organizations to participate in effective sustainable development initiatives, and (3) fostering collaboration to address social, economic, and environmental developments through HRNDA promoting resiliency, equity, and inclusivity in the communities.

On the local front, CHED Memorandum Order No. 052-16, otherwise known as "Pathways to Equity, Relevance and Advancement in Research, Innovation, and Extension in Philippine Higher Education," was released in response to the mandate given to HEIs, under RA 7722, which was the Republic Act that created CHED, and aimed, among others, to enable Philippine higher education institutions (HEIs) to become platforms for research and development, innovation and extension in pursuit of inclusive social and economic development. CMO No. 052-16 goes further in this pursuit by encouraging HEIs to partner with "communities, business, and industry in facilitating the transfer of knowledge or technology on specific developmental areas that directly affect the lives of individuals, families, and communities."

The Colegio de San Juan de Letran Calamba, heeding the call of CMO No. 052-16, engages in community and extension services within various communities to assist those in need. The School of Computer Studies and Technology (SCST) and the Community and Extension Services Department (CESD) formed a partnership with Brgy. Masili as a partner community. The SCST department actively participated in community and extension services in partnership with the Community Extension Services Department (CESD) to provide help. The execution of the community extension project created an additional learning opportunity. The goal of the project is to empower participants by equipping them with computer skills and to evaluate their readiness to work in their community upon completion of the program. There are several benefits to quantifying computer skills and unveiling the impact of a four-year computer skills training program, such as evaluating participant's skills' advancement, assessing the progress throughout the training, conducting an impact study to know the acquired skills that participants contribute to the community, enhancing employment, and conducting a comparative analysis of computer abilities before and after the training program. The researchers will find out if this computer skills training program demonstrates its effectiveness and advantages to all participants in the Barangay Masili community.

Barangay Masili was chosen as the partner community, as it is a small community located in Calamba, Laguna with only twenty percent (20%) of the total Internal Revenue Allotment (IRA) allocated budget given to it by the government based on their population. Upon investigation by the Community Extension Services department in 2015, the barangay manifested poverty indicators and one of the reasons was insufficient access to computer literacy and computer skills which led to limited job opportunities for the people in the community. The Barangay Masili needs computer training because the barangay officials and employees have limited knowledge of using computers. Most of them are unfamiliar with new technologies limiting their ability to participate in today's digital world. The majority of the participants lack familiarity with basic computer skills, less experience in using fundamental concepts, less basic typing and using a mouse, less understanding of file formats, and less knowledge in using software applications like word processing. If the participants have less basic computer skills, they have difficulty engaging in

accessing information and communicating online, including sending emails and finding online job opportunities that will improve their quality of life. For these reasons, the SCST planned the training program for Barangay Masili to extend help for computer training so that their computer skills improve, increase their satisfaction, and enhance their abilities to solve problems that will be required in their future work (Tewari, Mtose, & Ilesanmi, 2018).

II. OBJECTIVES OF THE STUDY

The study generally aimed to determine and describe the impact of the SCST community extension project implemented at the Barangay Masili, Calamba City Laguna.

Specifically, it aimed to:

1. Assess the impact of the four-year computer skills training program on the skills acquired by workers in the barangay for the benefit of the community.
2. Determine the planned and unplanned impact of the computer skills training program on barangay officials and workers of Barangay Masili, Calamba City, Laguna.
3. Determine the gaps between planned and unplanned impacts of the four-year computer skills training program on participants' personal and professional development of the participants.
4. Determine the issues and concerns in the implementation of a computer skills training program

Conceptual framework

Integrating Environmental, Social, and Governance (ESG) in the community is part of the commitment of SCST in the Colegio to make a positive impact on society and is dedicated to educating our partner community.

Environmental Sustainability was applied in the conceptual framework of computer training skills implemented in community extension; it involves equipping individuals with the knowledge and tools to address environmental challenges through digital means, promoting the efficient use of technology, and minimizing electronic waste, according to Chiabai et.al., (2018).

Figure 1. Conceptual Framework of the Study

The social component of the training program is exemplified through the community engagement that was facilitated in offering computer skills training to community members who may, otherwise, not be able to afford the costs of such training. In the context of ESG, social is about ensuring that the computer training skills program teaches technical skills and also contributes to a more equal, inclusive, and affluent society (Archer et. al., 2023).

Governance was also demonstrated through the feedback mechanisms monitoring the progress of the computer skills training program, with which transparency and accountability are promoted and help the community's needs to make them productive and be a better service to the people (SVB ESG Report, 2021)

In the context framework under the implementation of this study, the researchers determined the impact of the implemented computer skills training program in terms of social, environmental, economic, and governance aspects to the community extension partner of the Colegio. The social impact of computer skills training programs on the participants can boost self-confidence in creating documents, writing and composing emails using Gmail, and accessing government services implemented in their community. The environmental impact on the participants can reduce the usage of paper and practice the skills in using emails and messaging to diminish the need for printed documents. The participants can be educated on green IT practices and become aware of the importance of the environment. The economic impact will allow the participants to handle computer work in their community or job in the industries, to have better-paying jobs, or to start computer services like typing documents and printing in their community. For these reasons, the unemployment rates might be reduced and the computer skills training is an advantage for the participants. The impact on governance in implementing this computer skills training program will improve public service to their community and promote effective and responsible public servants.

At the end of the computer training skills program, an evaluation was conducted on the partner community extension on the impact or effectiveness of the program. The program content will be evaluated, as well as the delivery of the computer training skills program conducted on both face-to-face and online modalities and, finally, the outcome of the training skills program on the participants. The gap in assessing the impact on the community should lead to follow-up assessment and encouragement to the participants to apply the acquired skills and share the learnings with the community and in the community projects.

III. RESEARCH METHODOLOGY

The research methodology, research design, research instruments, and data analysis are all covered in the methodology.

3.1 Research Design

This research utilized the convergent mixed methods approach, which combined both quantitative and qualitative data collection and analysis methods to provide a comprehensive understanding of the program's effectiveness. According to Dawadi et.al.(2021), convergent mixed methods describe relevant data from mixed approaches. It provides a step-by-step information-building and scaffolding process and the descriptive statistics were used to summarize and describe the quantitative data collected through surveys. These surveys also gathered demographic information and participants' perceptions of the program's effectiveness. Moreover, in qualitative data, the researcher uses focus group interviews to gather collective insights and perspectives, with this thematic analysis was conducted to identify key themes and patterns in the qualitative data.

3.2 Population and Sample

The initial number of participants in the four-year Computer Skills Training Program held in Barangay Masili, Calamba City was only 6 participants based on CESD documentation. The participants were three (3) Barangay Health Workers (BHWs), one (1) Barangay Midwife, one (1) Barangay Nutritionist Scholar (BNS), and one (1) Barangay Kagawad in the barangay. Before the computer skills training program started, there were only 3 participants who had little knowledge of using computers while the other participants did not know about computers. This program helps them enhance their development by contributing their skills to their community (Borbon et.al. 2022).

3.3 Data and Sources of Data

Two distinct approaches- surveys and in-depth interviews as potential paths to determine and understand the impact of the program. The researcher started the study by evaluating all documents of CES as part of the data source, the record of CS & IT operational Planning AY 2015-2016 which emphasizes the document about the accomplished training needs assessment, Strengthening Computer Skills through Training AY 2016-2020. The researchers used the documentation files from the Community Extension Services Department (CESD) from their written reports and studies in the years 2015-2020 as the data sources.

3.4 Research Instrument

The researchers used questionnaires with a Likert scale for quantitative analysis to measure the participants' opinions and learnings on the program. The quantitative approach is also used to test the effectiveness of the computer skill program. The researchers also conducted focus group discussions to gather insights on the shared experiences and opinions of the participants. This is a group interaction where a set of questions are being prepared as guides for the conversation.

3.5 Data Analysis

The data analysis describes the results of the study about the impact study on the four-year computer skills training project in Barangay Masili. The researchers conducted survey questionnaires to the participants and used the Likert scale below.

Rating	Range/Interval	Description/Interpretation
5	4.21 – 5.00	Extremely Impactful
4	3.41 – 4.20	Impactful
3	2.61- 3.40	Somewhat Impactful
2	1.81 -2.60	Slightly Impactful
1	1.00 – 1.80	No Impact

Figure 2. Likert Scale

IV. RESULTS AND DISCUSSION

The Thematic Theme of Focus Group Discussion (FGD)

The researchers also used the aim to gather insights into the participants' experiences, skills acquired, and the program's impact on their personal and professional lives. Also, combining quantitative and qualitative to analyze and interpret the results.

4.2 Impact of Computer Skills

Table 1 Impact of Computer Skills Training on Worker Skills

Theme	Codes
Skill Acquisition	Specific skills learned (e.g., word processing, spreadsheets, access), proficiency levels, application of skills in the workplace
Skill Transfer	Ability to transfer skills to new tasks or software, impact on job performance
Community Benefits	Increased efficiency, enhanced service delivery, economic impact, social impact
Training Effectiveness	Quality of training materials, participant engagement, support systems
Infrastructure	Availability of computers, and other resources, impact on training and skill development
Cultural Factors	Cultural attitudes towards technology,age, social norms

This section presents the results of the study, which aimed to investigate the impact of a four-year computer training skills program where the respondents learned and developed their skills in terms of their job performance at Barangay Masili. The researcher combines quantitative and qualitative data collection analysis.

In Table 1, the researchers can acquire a deeper understanding of the impact of computer training skills programs based on the themes and code provided. The table above can be used to examine the program if there's a need for improvement, check the participants' engagement, the quality of training materials, the availability of computers and other resources, and the cultural attitudes of the participants towards technology.

A fundamental aspect of lifelong learning is to acquire new skills, use them in various activities, and continuously improve oneself (Alla, 2024). Computer skills training helps the participants to be employable in a company and can contribute to economic development. The computer training skills program implemented by the SCST department must ensure equal opportunities for everyone in the community extension partners and deal with any cultural problems.

4.2 Planned and Unplanned Impacts of Computer Skills Training

Table 2 Planned and Unplanned Impacts of Computer Skills Training

Theme	Codes
Planned Impacts	Improved efficiency, increased productivity
Unplanned Impacts	Job displacement, dependency on technology, social equity
Factors Affecting Impacts	Training effectiveness, participant engagement, infrastructure, support, community context

In Table 2 Planned and Unplanned Impacts of Computer Skills Training, the researcher presents a coding frame for analyzing the data and found out that the planned impacts of the computer skills training program effectively improved efficiency and increased productivity in Barangay Masili. For the unplanned impacts, the training program brought about limited access to computers, hindering hands-on practice for many participants. The researcher found that the factors affecting the impacts are participant engagement, infrastructure, and the community support itself. Despite these challenges, some participants having personal computers were able to continue learning and applying their skills at home. Moreover, SCST provided additional computers and encoder support.

The computer skills training program in Barangay Masili has had both planned and unplanned impacts on participants. While the program effectively improved efficiency and increased productivity, challenges such as limited access to computers hindered hands-on practice for many participants and prevented the realization of its full potential. Factors affecting the impacts include participant engagement, infrastructure, and community support. Despite these challenges, as Mor, Laks, and Hershkovitz (2021) argue, participants' experience in computer skills training programs and increased confidence and competence in using technology directly correlates with improved efficiency in job-related tasks. The findings of the computer skills training program in Barangay Masili further support this claim. By addressing the challenges identified in the study and focusing on strategies to enhance participant engagement, providing ongoing support, and ensuring equitable access to resources, the program can better equip participants to grow in this digital age and contribute to the community's economic development. Additionally, it aligns with the positive impacts observed in the program, emphasizing the significant enhancement of employee productivity and efficiency through computer skills training.

4.3 Gaps Between Planned and Unplanned Impacts of Computer Skills Training

Table 3 Gaps Between Planned and Unplanned Impacts of Computer Skills Training

Theme	Codes
Job Displacement	Loss of jobs due to finished contract or maturity of terms
Skill Mismatch	Lack of alignment between acquired skills and challenges in applying skills
Cultural Resistance	Resistance to change, reluctance to adopt new technologies, cultural barriers to learning
Dependency on Technology	Increased reliance on technology, lack of infrastruture
Social Equity	Impact on social equity and the digital divide

In Table 3: Gaps Between Planned and Unplanned Impacts of Computer Skills Training, the researcher presents the framework used to analyze the unplanned impacts of the program. This framework organizes and analyzes data, identifying patterns and relationships among the given themes. One of the unplanned impacts was job displacement, as some participants transitioned from BHW workers to other organizations. Additionally, the maturity of their work at the barangay and skill misalignment with job assignments emerged as challenges. Cultural resistance also hindered learning, and a lack of personal computers for practice compounded the digital divide, impacting overall training effectiveness.

The ILO's 2021 study found that the COVID-19 pandemic accelerated the adoption of digital technologies, leading to job displacement in some sectors. Workers with outdated skills or skills misaligned with new job requirements are at a higher risk of losing their jobs. This aligns with the findings of the computer skills training program in Barangay Masili, where some participants transitioned from BHW workers to other organizations, potentially due to skill mismatches. The World Economic Forum's Future of Jobs Report 2021 emphasizes the need for continuous learning and upskilling to adapt to the changing job market. This underscores the importance of addressing the challenges identified in the computer skills training program in Barangay Masili, such as skill misalignment, cultural resistance, and limited access to resources. By focusing on these areas, the program can better equip participants to thrive in the digital age and remain competitive in the labor market.

4.4 Challenges and Issues in Computer Skills Training Program Implementation

Table 4 Challenges and Issues in Computer Skills Training Program Implementation

Theme	Codes
Training Delivery	Continuity, materials, practice time, instructor availability
Infrastructure	Computer availability, equipment, maintenance
Participant Engagement	Age, experience, interest, time constraints
System Implementation	Usage, sustainability, data accuracy, knowledge transfer
Cultural Factors	Attitudes towards technology, social norms

In Table 4: Challenges and Issues in Computer Skills Training Program Implementation, the researcher employs the given themes to analyze data within these categories. By coding the data, the researcher can identify the root causes of challenges encountered during the computer skills training program and develop effective improvement solutions. While the training program was successfully delivered with SCST support (student and instructor availability) and ample time for training, challenges arose. Some participants, particularly older individuals, were less engaged and faced time constraints. To address these issues, the SCST provided support by transferring data, assisting with encoding, and encouraging shy participants.

The computer skills training program in Barangay Masili faced challenges such as limited access to resources, cultural resistance, and the digital divide. To address these issues, the SCST provided additional computers and encoding support, while also creating a supportive learning environment. These efforts align with the theoretical perspectives highlighted by Mor, Laks, and Hershkovitz (2021), the OECD (2021), and the World Economic Forum (2021). By addressing these challenges focusing on creating a supportive learning environment and ensuring access to necessary resources, the program can better equip participants to thrive in the digital age.

4.5 Forwarding Ability

Table 5 Forwarding Ability

PAGHAHASA NG KAKAYAHAN	Rating	Interpretation	Rank
Learn well the tasks in the Computer Skills Training Program. Natutunan ng mabuti ang mga gawain na nailatag	2.50	Slightly Impactful	4
Knowledgeable about the use of the computer May kaalaman na sa paggamit ng kumpyuter	3.00	Somewhat impactful	3
Well-versed technology skills Maayos na nagagamit ang kasanayan sa teknolohiya	3.33	Somewhat impactful	1
Well-cultivated knowledge Nalinang ng maayos ang kaalaman	3.17	Somewhat impactful	2
Adequate knowledge of putting the data. May sapat na kaalaman sa paglalagay ng mga datus.	2.40	Slightly Impactful	5
Total	**2.88**	**Somewhat impactful**	

The forwarding ability measures an individual's ability to adapt and learn from the computer training skills implemented for participants. This assessment evaluates the impact acquired by workers in the barangay for the benefit of the community. These computer training skills emphasize the basic knowledge of using the computer and training in using applications like MS Office Applications.

Table 5 shows the Forwarding Ability of the training program on computer skills. The participants were asked to rate their ability to learn and enhance their skills and to have knowledge in using computer technology. Overall, the average rating for the implemented program was "somewhat impactful" (2.88). The highest-rated item was "well-versed technology skills" (3.33) as "somewhat impactful.". "Adequate knowledge of inputting the data," was rated lowest with "slightly impactful" (2.40). The "well-cultivated knowledge" ranks 2nd with an average rating of 3.17 (somewhat impactful), while "knowledge about the use of computer "ranked 3rd with a rating of 3.00 interpreted as "somewhat impactful." Lastly, the item "learn well task in the computer skills training program" was rated as "slightly impactful" (2.50) which ranked 4th. The result is "somewhat impactful" meaning it has a minor effect in acquiring the knowledge during the computer training skills of the participants because of the limitation to practice hands-on due to the availability of just one computer in the barangay and there were no instructional materials provided after the training. Additionally, lack of motivation to improve their computer skills, one thing that the researchers observed is that the older age of participants have difficulty adapting to new technologies.

The researchers observed during the interview that the participants may not see the immediate need in learning computer skills in their daily lives and this is not on their list of priorities. This implies that personal knowledge or experience is still insufficient for the respondents to handle their job well (Bona et.al., 2021) and further improvements are needed for their readiness to work with computers (Mor et.al., 2021). If the participants give importance to this computer training skills program the economic impact will allow the participants to handle computer work in their community or job in the industries, to have better-paying jobs, or start computer services like typing documents and printing in their community.

The computer training skills program has a significant impact on the participants, especially in improving their everyday productivity on the tasks assigned to them and enabling them to solve problems like using data effectively and troubleshooting issues in their workplace. The researchers would like to determine the planned and unplanned impact of the computer skills training program on barangay officials and workers of Barangay Masili, Calamba City, Laguna.

4.6 Impact of the Program

Table 6 Impact of the Program

EPEKTO NG PROGRAMA	Rating	Interpretation	Rank
Helpful to do every day. Nakatulong sa araw-araw na gawain	3.67	Impactful	2
Helped a lot in the current work-life. Malaki ang naitulong sa kasalukuyang hanap-buhay	4.00	Impactful	1
Able to compete in the technology field. May kakayanang makipagkumpetensya sa larangang teknolohiya	3.33	Somewhat impactful	3
Total	3.67	Impactful	

Table 6 shows the results of a computer skills training program and its impact on the respondents. The respondents rated "helped a lot in the current work-life" the highest and ranked 1, with an average rating of 4.00 and considered impactful because after the training the participants created a document form and the sample form is at the end page of appendices. Aside from that, they encoded the data into the system that the SCST students developed and implemented in the barangay health center. The "ability to compete in the technology field" was seen as "somewhat impactful" (3.33). Overall, the program is considered "impactful" (3.67). The results showed that the learnings in computer training skills become helpful not only to their work but also for personal growth, says the barangay councilor. As part of the training planned for MS Word applications, the barangay workers learned how to create various forms because of their willingness to adopt electronic documents. The Councilor also shared that during the training, the participant learned a lot about the use of computers, including proper computer start-up and shutdown procedures, as well as minor troubleshooting which can properly be managed now. This validates the survey indicating that the training helped a lot in their current work. However, even as the respondents said that the online training was really helpful, they said it would have been better if they had trained them more and provided modules after the training was conducted. Also, the computer skills training was discontinued due to the pandemic. The unplanned were mentioned, like conducting online training about using Gmail and Gdrive on the Google website. The SCST department continued the computer training skills and conducted online computer training skills in 2020 because face-to-face training wasn't allowed back then.

The results showed that participants need more hands-on practice to fully understand the skills needed in their community so that they can contribute effectively to their communities. Hands-on practice helps the participants to internalize the concepts of computers and through repeated practice, they will be able to gain confidence in using computers. There are still areas of improvement and the time allotted for the training was insufficient (Laniton, Dagaraga, & Roble 2021). Even then, one of the participants was able to create a form named "Prenatal Form," which is still being used up to this day.

The ability to use the basic functions of computers, create documents, using Gmail and Gdrive. Overall the researcher themes indicate "natuto", or learned in the different training implemented. With this computer training program, awareness of socio-economic realities (Borbon et.al. 2022) is brought to the fore by all respondents for the community whom they serve. Participants can lessen their impact on the environment by using less paper and honing their email and messaging skills to use fewer printed documents. The participants can learn about green IT practices and appreciate how important they are to the environment.

4.7 Sustainability of the Developed Programs

Table 7 Sustainability of the Developed Programs

Pagpapanatili ng Programa	Rating	Interpretation	Rank
Continued use of the e-Health record system Naipagpapatuloy ang paggamit ng E-health record system	3.00	Somewhat impactful	1
Continued use of E-blotter records Naipagpapatuloy ang paggamit ng E-blotter records	2.40	Slightly Impactful	3
Continued use of the barangay website Naipagpapatuloy ang paggamit ng barangay website	2.50	Slightly Impactful	2
Total	**2.63**	**Somewhat Impactful**	

The sustainability of developed computer programs is built to be efficient, and maintainable, and their functionality must continue to be used even after the programs have lapsed. Computer programs must be sustainable to have positive effects on society, the economy, and the environment which must leave as little of an environmental impact as possible. The objective of the given table is to determine the gaps between planned and unplanned impacts of the four-year computer skills training program on participants' personal and professional development of the participants.

Table 7 shows the sustainability of the developed computer programs, where the respondents rated their impact on their ability to keep records, make reports, and continue using it. The highest-rated item was the "continued use of e-health record system," which is considered "somewhat impactful" (3.00), while the "continued use of E-blotter records" received the lowest rating of 2.40, which is interpreted as "slightly impactful." On the other hand, the barangay website which was developed under the same SCST program was considered as "slightly impactful" (2.50). Overall, the program was positively received and considered "somewhat impactful" (2.63). According to the barangay health workers, the system for Barangay Health using the MS Access application was implemented and used to store all the data or records of the barangay. It is considered that the system in MS Access was used during the years of training and implementation. The responsiveness of the system for barangay use is measured by its ability to provide necessary information and its ease of use for workers. This aligns with the findings of Bringula et al. (2022), who concluded that the service to the community would be more efficient due to participants' easy access to required information. The researcher asked the participants if they learned how to encode all data in the system and the participants said," Marunong naman". However, the newly hired nurse was unable to continue using the system due to a lack of computer knowledge, and no one was able to train and share with them how the system works because the person in charge had already retired. The E-blotter system is available, be that as it may, but was not implemented because according to the barangay councilor, the health record system is prioritized to use because there are a lot of patients at that time and only one computer is available.
During the training, the SCST volunteer would like to create a website for Barangay Masili but the planned website creation was not fulfilled. It was found out that the unplanned program is focused on the topic of HTML because of the pandemic. However, it also gives ideas and knowledge to the participants to create their pages. The researchers found out that the computer training that provided them, gives them the idea of having a page for the barangay to facilitate easy communication and posting announcements within the community. With this concept, the page still exists today and continuously helps the barangay in disseminating valuable information to their community.

The systems that the SCST provides will be very helpful to the barangay if it would be better to have a one-human-one-computer setup for better learning and upskilling. Additionally, if the faculty assigned to the CES program provides a copy of the instructional manual that will serve as a guide in case of reviewing the manual or having a transition due to national election implemented every 3 years for local government.

The sustainability of the developed programs or "Pagpapanatili ng Programa" will help the community, economics-wise. This computer skills training program allows the participants to handle computer work in their community and improve their computer skills in serving the community. This will also help them to gain experience in adapting to technology and highlight areas in which the Barangay Masili needs support, guidance, or mentoring in a service-learning project (Mey et.al. 2018) of the Colegio. This is also a life-long learning experience for the respondents being trained and whatever learnings in the value of helping and sharing their knowledge will impact their community.

The advantages of implementing computer training skills are essential in a community extension to enhance productivity and efficiency at work to have better public service. The objective is to determine if the computer training skills are effectively utilized especially in implementing the E-Health Record System and apply the knowledge in MS Office application.

4.8 Advantages of the implemented program

Table 8 Advantages of the implemented program

Kapakinabangan	Rating	Interpretation	Rank
Utilize properly the skill that you learn in the Training. Nagamit ng maayos ang mga natutunan na kaalaman.	3.60	Impactful	1
Knowledge in using E-Health record System. May sapat na kaalaman sa paggamit ng E-health record system	3.00	Somewhat impactful	2
Knowledge in using MS Word, MS Excel and MS PowerPoint. May sapat na kaalaman sa paggamit ng MS Word, MS Excel at MS PowerPoint	2.50	Slightly impactful	3
Total	**3.03**	**Somewhat impactful**	

Table 8 presents the advantages of a computer skills training program where the respondents rated its impact on their knowledge and skills. The respondents rated "utilize properly the skill that you learned in the training" as "impactful" (3.60), however, the least rated item was knowledge in using basic MS Office applications, which received a rating of 2.50 (slightly impactful). On the other hand, "knowledge in using the E-health record system was rated as "somewhat impactful" (3.00). The program received an overall average rating of 3.03, (somewhat impactful). The results show that the learning was utilized properly during the time of implementing the computer training skills because the SCST volunteers assisted the participants when visiting the barangay community but when the pandemic came, the participants were inactive in using the computer and abruptly stop the use of E-health Record System which made their work more difficult. The reason is that the SCST volunteers could not reach them as people at that time were not allowed to go out because of the pandemic situation. Aside from that, other participants in the program retired, the barangay councilor did not win the election, and others were old and not very interested in using computers. The knowledge in using the MS Office tools was applied but due to the barangay transition, mentioned that knowledge transfer on computers was not done because the participant was unsure if he could effectively teach other fellow workers in the barangay. The findings of this study show that the participants gained quite a substantial improvement in their computer skills training, notwithstanding the FGD results that show the challenge of the lack of computer facilities in their office (Laniton, Dagaraga, & Roble 2021), the resignation of some of the employees due to the COVID 19 pandemic and the presence of a few hold-overs that are still using the manual methods of operations. It was revealed during the interview that the participants realized the practical value of applying the acquired skills needed in their everyday work (Fergusson, 2022). It is important to continuously learn and apply the skills so that their performance in their work leads to more productivity.

In the study of Laniton et.al. (2021), the goal of the computer training program was to equip employees on how to use the basic operations of computers that will assess them based on their work. Based on the study of Dagatan et al. (2023), learning computers, especially in MS Office is a requirement because the community extension project promotes every human being to be technologically oriented. Salazar (2020) and Luciano et al.(2022) assessed the impact of the implemented community extension programs particularly in computer literacy to provide sustainable activities. It shows that this has an impact on the community because the participants' learnings realize the importance of how to use the computer that is beneficial to their job and be productive in their community. Also, if they give importance to the impact on governance in implementing this computer skills training program will improve public service to their community and promote effective and responsible public servants.

Summary of Significant Findings

1. Planned Impact of Computer Skills Training Program

Continuous training opportunities to enhance their competence and confidence in using computers. The planned impact of the Computer Skills Training Program is the following: to maintain the MS Access system incorporating the different forms used at the barangay, especially to the health center, creating document files, and writing using MS Office and other productivity tools and also includes the composing of emails using gmails. The participants can reduce the usage of printed documents which can be a big help in the environment. Through this training public service and responsible public servants.

2. Unplanned Impact of Computer Skills Training Program

The participants in Barangay Masili finished the training in a specified term, and the utilization of skills and knowledge for the barangay personally continued and was used by the succeeding workers. The participants learned a lot about the use of computers, including proper computer start-up and shutdown procedures, as well as minor troubleshooting. However, respondents said that the online training was really helpful but it would be better if they had trained them more and provided modules after the training was conducted.

Due to the pandemic, the computer training skills were abruptly stopped and this activity was unplanned. Since the use of the internet is needed, the School of Computer Studies and Technology (SCST) conducted online training in the barangay so that their services to the community continue. The SCST conducted computer training about using Gmail and Gdrive. These will benefit them because this is additional learning for the workers which is an easy way to communicate and store data online. Despite the pandemic, the learnings and services continue in their community. The Barangay Masili workers admitted that the training was a very big help for the participants and to gain awareness of new technology.

3. Gaps of the Computer Skills Training Program

The computer skills training program was implemented in 5 consecutive years, by the SCST faculty and student volunteers. Topics were conducted and taught by the faculty to the participants, as suggested by the Barangay Councilor as the training was conducted. The participants also encoded all necessary information in the system that SCST gave to them. Having one computer only as SCST provided, the training program taught hard and took time to understand. The trained participants also felt anxiety as feel old enough in the task, and the SCST also quite stops monitoring the system implementation when there's a pandemic As a result, there were trained workers did not continue the system at all and back again manually writing of records, but the electronic document continues to implement.

4. Determine the issues and concerns in the implementation of a computer skills training program

The issues and concerns highlighted by the Barangay Health worker during the participation in the computer training skill program, facilities, and technology. Mostly, the participants viewed the importance of training conducted by the faculty of SCST and student volunteers positively. However, in terms of active participation and learning outcomes, the participant finds it difficult to remember all the information and details. Having only one computer in the barangay makes it difficult to practice all the necessary skills learned in the training. Another issue and concern is the age of the participants, who find the training more challenging and hard to understand and also affects the pandemic situation to stop the use of computers. Moreover, lack of the documentation and video for reviewing the training is one of the big issues as the participant did not remember all the information during the training.

V. CONCLUSION

From the results and discussion, the following conclusions were drawn:

1. The developed computer skills training program of SCST for Barangay Masili was well implemented. The participants were equipped with the necessary computer skills to access and manage the data within SCST faculty and student volunteers provided a system to the Barangay Health Center, enabling them to create electronic documents to be used in the barangay and adapt to new technologies and applications to become productive in their tasks. However, most of the participants did not pursue further after learning computer skills due to some reasons; 1) the computer skills training was unexpectedly halted due to the COVID-19 pandemic, as SCST volunteers were not allowed to go out to prevent the risk of getting the virus; 2) the participants were not able to ask for help if they have questions with regard to using the computer because they have no personal contact with the SCST volunteer and also due to the pandemic situation; 3) when the pandemic was still active, the computer skills training was conducted online; 4) due to barangay transition the implemented system provided by the SCST was not continued because no one was confident in sharing their computer skills at that time, being unsure if they could effectively teach them; 5) some participants were quite old, showing a lack of interest in continuing with computer skills training; 6) only one computer available in the barangay 6) Lastly, there were barangay officials who were not re-elected so had to leave their barangay posts.

2. Commitment to volunteering involves a sustained dedication to the missions and values of the Colegio. They invested time in understanding the needs of the partner community and sharing their knowledge and computer skills without financial compensation. SCST volunteers participated in 5 consecutive years of implementing the said computer skills training program. In the overall computer skills training program, the faculty and student volunteers learned the values of helping, sharing, and patience while conducting activities in the partner community.

3. The five-year implementation of the computer skills training program by SCST faculty and student volunteers, while initially successful in equipping the participants with basic skills, revealed several gaps that impacted its long-term sustainability. The limitation in resources, particularly with the lack of computers, was a big hindrance to further development. Moreover, with the support and monitoring that dwindled during and after the pandemic, the researcher found that sustained follow-up is essential to ensure skills retention and system utilization for all the participants. Lastly, in addressing the age-related anxieties of the participants, providing training that can foster confidence and a positive learning environment can improve participant engagement and adoption of the said system.

4. While the Barangay Health workers acknowledge the value of training provided by the SCST faculty and volunteers, several key issues hindered the participants from having full engagement and skill development. The researcher found that limited resources, like a lack of computers, restricted the opportunities for the participants to gain further learning after the training. The participants' age was also an issue and could pose a challenge in retaining the learning skills presented during the training. The absence of documentation and video resources hindered the participants from reviewing, retaining, and reinforcing the learned skills from the program. Addressing these issues would be crucial to the program's success. However, providing additional computers, creating age-appropriate training materials, and developing supplementary documentation and video tutorials can significantly improve participant engagement, knowledge retention, and overall program effectiveness.

Recommendations

Based on the conclusion made, the following recommendations are offered:

1. To develop a hybrid training model for the Community Service Extension project that aims to provide training to all participants from the partner community. This would be a combination of in-person sessions with remote learning options like online tutorials, and video resources to ensure continuity of the program, notwithstanding other unforeseen circumstances. Adopting online helpers where participants can seek assistance from trained volunteers even after the initial training would be a good way to go, as well. To address skill retention and confidence, the department of SCST can conduct periodic workshops or online sessions to reinforce the skills and address the knowledge gaps, especially during prolonged breaks or transitions. Developing training materials for clear documentation, guides, and video tutorials for participants for independent self-paced studying and refreshing of memory retention should also be done and can include implementing knowledge transfer plans for Barangay transitions, where outgoing officials with computer skills would be responsible for mentoring incoming officials or workers. Moreover, continuing communication and collaboration between SCST and the Barangay Council should be done to address the challenges in adaptation of the program to ensure its long-term sustainability.

2. To strengthen volunteer engagement, expressing gratitude to all individual volunteers through personalized messages, certificates, or small tokens of appreciation, should be a regular practice. For learning and development, conducting workshops and trainings based on topics like community needs assessment, or cultural sensitivities should be implemented in the Barangay. Organizing sessions where experienced volunteers can share their experiences and best practices with new volunteers, creating more opportunities to connect and build relationships with each other, and matching the volunteer skills and interests with specific community needs to ensure a fulfilling experience would also be a good direction to take. Continued monitoring of the program's impact and volunteers' hours to demonstrate the value of their commitment and gathering feedback through regular surveys or focus group discussions would also help understand volunteer experiences and suggestions for improvement.

3. To improve the effectiveness and sustainability of a five-year computer skills training program, Colegio should develop and grant opportunities, fundraising initiatives, or collaborations with technology companies to acquire more computers for the training program. Considering the online resources like tablet or mobile device, to one human-machine, especially when limited computer access is a challenge, may also be explored moving forward. Diverse learning instructional materials (written, visual, and audio), catering to different learning skill preferences and abilities should also be developed. Moreover, the SCST can establish refresher courses or online support fora to address issues, questions, and problems. Creation of user manuals, or videos for troubleshooting guides for continued reference and self-learning should also be done.

4. To highlight the crucial areas for improvement in the SCST computer skills training program, the SCST can implement follow-up systems like scheduled regular check-ins to answer questions and other concerns. Promoting support in learning environments fostering confidence and overcoming age-related challenges like in the presentations, explanations, larger fonts and hands-on activities to cater to the specific needs of participants of different age groups should be continually done.

By implementing these recommendations, the SCST program can address the issues hindering full participation engagement and skills development.

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