

Computer Repair Servicing in the Municipality of Victoria and Liliw Laguna, Philippines

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Abstract- An Extension Service on Computer Servicing as implemented by the College of Engineering of Laguna State Polytechnic University, Santa Cruz Campus in the community of Victoria and Liliw Laguna is described in this paper.

The purpose of the extension service is to comply with the goal of the extension program to further strengthen research and community extension as the major functions of the university and to intensify the organization of community extension programs and services that are relevant and responsive to the needs of depressed communities in the Province of Laguna, through these, the attainment of the University's vision of transforming lives and communities by imparting knowledge of the faculty member as well the students through technology transfer.

Participants was assessed in terms of the knowledge and attitude being developed, skills they have learned throughout the training, the aspiration being introduced as a desired to more rigorous work, and finally assessed the economic status of each individuals, that after the training, an enormous changes in their lives happened.

Index Terms- Computer Repair Servicing, Transforming Lives and Communities, Extension and Training Services, Victoria and Liliw, laguna.

I. INTRODUCTION

The Laguna State Polytechnic University's (LSPU) Extension and Community Services, envisions developing socially aware, sensitive and responsive members of Laguna community through active involvement in community extension, service learning, and outreach activities towards community development. The extension services continue to discover and rediscover innovations to realize the relevant and responsive strategies, programs, services, and projects through participatory and transformational approach responsively transforming vision and mission of the extension services to the community.

As a result of Participatory Rural Appraisal (PRA), the need for technology transfer through Computer Repair servicing training was established for the community of Victoria and Liliw Laguna, bringing up trainees such as professionals and non-professionals, as well as out - of school- youth.

Computer technicians are in high demand. With an increasing number of computers used in both the home and workplace, there is a significant and ever growing demand for people to install, maintain and repair both hardware and software. While many computer courses teach programming, surprisingly

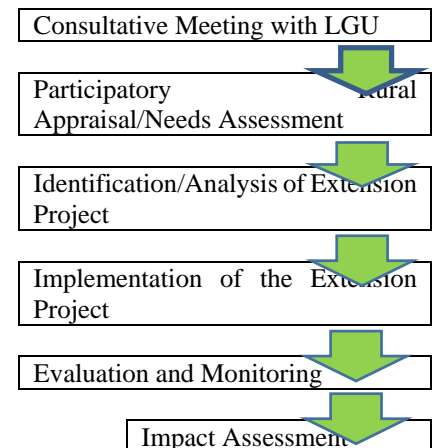
few provide the type of training needed to be a competent and effective technician.

In this training the participants are provided an introduction to servicing computers. It develops a **broad and general understanding of repair and maintenance procedures** that can be used at work or home, and in doing so provides a good starting point for anyone seeking a career in **computer servicing**.

II. METHODOLOGY

The training is designed to develop knowledge, skills, and attitudes of a computer service technician in accordance with industry standards. It covers basic and common competencies such as installing, maintaining, configuring, and diagnosing computer systems and networks. Considering also the opportunity in landing a job, a computer technician is in demand in the industry to date.

The following procedures were done in the conduct of the program starting from a consultative meeting with the Local Government Unit of Victoria and Liliw Laguna. Thru these a participatory rural appraisal was initiated by the faculty of engineering who also serve as the social development worker. After a thorough analysis and identification of the extension program, implementation comes next, where training was conducted. For the evaluation and monitoring of the training, as well as the impact assessment, the LSPU group of social development worker and the LGU worked hand in hand in the determination and assessment of the training to each participants of the program.



The activities and the learning outcomes of each topic discussed in the Computer Repair Servicing

Lessons discussed in the course Computer Servicing	
Activity	Learning Outcomes
The computer workshop	Tools (a basic tool kit, more advanced requirements), soldering, workshop layout, workshop management, customer relations, etc.
Computer and workshop safety	Understanding electricity, workshop safety procedures, staff safety, avoiding computer damage, circuits, measuring electricity-current, voltage, resistance, ohm's law, etc.
System components	Identifying different hardware components (e.g. CPU, socket, Motherboard, I/O card, Parallel and Serial ports, IDE drive, etc).
Different Systems & Basic Disassembly	Identifying and removing specific parts from a computer, distinguishing between different types of PC, disassembly procedure.
Peripherals	How to assemble peripherals (e.g. mouse, printer, modem) for a computer system
System Assembly	Procedure for assembly/installation of main components.
Installation of software	Installing different software programs in computers, in accordance with manuals
Computer Maintenance	An introduction - preventative and routine maintenance procedures
Troubleshooting	An introduction - determining an error, hard disk problems, viruses, motherboard battery, bugs, other common errors and their remedies, when to call a specialist.

For each of the topic covered, the trainees/ participants are first exposed to the basic concept. Moving from the basic grasp of the module, the operating principles and its practical applications are then discussed and explored in great depth. Series of hands-on activities was conducted to facilitate the learning. Demonstration was also conducted and explanations was given to lead the participants into active engagement in the learning process. Participant then perform practical activities for each individual module.

III. RESULTS AND DISCUSSION

Feedbacks eventually used to assess and improve the programs. Hence, the university contributes to the development of the partner communities and at the same time the values and valuable learning through university's exposure to partner

communities play a vital role in the significant development of the Laguna community.

The following variables and its corresponding indicators was used to measure the impact of Computer Servicing training to the participants.

Mean and Standard Deviation of Impact Assessment of Computer Servicing training in terms of Knowledge

Indicators	Mean	Standard Deviation	Remark
The course content was simple and understandable.	3.73	0.50	Strongly Agree
The illustrations, videos and interactions were used in the right level.	3.61	0.51	Strongly Agree
I could navigate the module very easily	3.21	0.43	Agree
The course content was appropriate and was presented in a structure manner	3.44	0.55	Strongly Agree
The duration of the course was just right.	3.82	0.59	Strongly Agree
The course has improved my knowledge on the computer hardware servicing	3.60	0.57	Strongly Agree
Composite Mean	3.56		Strongly Agree

Impact assessment of Computer Servicing training in terms of knowledge was 3.73 (SD=0.50) if the course content was simple and understandable, 3.61 (SD=0.51) if the illustration, videos and interactions were used in the right level, 3.21 (SD=0.43) for the easy navigation of module, 3.44 (SD=0.55) if the course content was appropriate and was presented in a structure manner, 3.82 (SD=0.55) if the duration of the course was just right and 3.60 (SD=0.57) if the course has improved their knowledge on the computer hardware servicing.

The overall mean rating of 3.56 manifest respondents' agreement that the impact assessment on Computer servicing training in terms of knowledge was found out to be strongly agree. The responses appear to be homogeneous as shown by the small values of standard deviations.

Thomas, (2010) knowledge gain in different trainings can be define into two further matters and to be taken into consideration, namely the degree of certainty and the degree of precision. All knowledge is more or less uncertain and more or less vague. These are, in a sense, opposing characters: vague knowledge has more likelihood of truth than precise knowledge, but is less useful. One of the aims of training is to increase precision without diminishing certainty. But the knowledge must include some propositions that are rather vague and some that are only rather probable. It is important, however, to indicate vagueness and uncertainty where they are present, and therefore, knowledge in school as well as in some training is very important in an individual most especially in today's kind of living. It is a

big help in order to be updated in the technology where our society is facing.

Mean and Standard Deviation on the Assessment of Computer Servicing training in terms of Attitude

Indicators	Mean	Standard Deviation	Remark
Extent to which the training program brought out the change in my techniques	4.22	0.64	Strongly Agree
Extent to which training program brought out the change in my behavior	4.44	0.61	Strongly Agree
Extent to which I am satisfied with what I am doing	3.81	0.53	Strongly Agree
Extent to which training program brought out motivation for continuous learning	3.50	0.41	Strongly Agree
Assisted me to develop skills in interacting with individuals with disabilities	3.81	0.59	Strongly Agree
Been worthwhile	3.84	0.64	Strongly Agree
Was tailored to meet my learning style (the way I learn best)	3.82	0.51	Strongly Agree
Composite Mean	3.92		Strongly Agree

Impact assessment of Computer Servicing training in terms of attitude was 4.22 (SD=0.64) if the training program brought out the change in their techniques, 4.44 (SD=0.61) if the training program brought out the change in their behavior, 3.81 (SD=0.53) if they are satisfied with what they are doing, 3.50 (SD=0.41) if the training program brought out motivation for continuous learning, 3.81 (SD=0.59) if the training assisted them to develop skills in interacting with individuals with disabilities, 3.84 (SD=0.64) if they feel they become worthwhile and 3.82 (SD=0.51) if the training was tailored to meet the learning style of the participants.

Howard, (2011), the power of awareness keeps growing when the attitude is to look within to detect the patterns of resistance and fears and negativity in inner space. One cannot achieve a strong awareness overnight, it takes time attitude towards life decides the experience of it. The attitude of looking to learn is the most powerful attitude to carry since it allows for an inherently positive experience of life.

Mean and Standard Deviation on the Assessment of Computer Servicing training in terms of Skills

Indicators	Mean	Standard Deviation	Remark
I can open a computer case.	4.14	0.68	Strongly Agree
I can connect the mouse, keyboard and monitor	4.11	0.57	Strongly Agree
I can apply occupational health & safety precautions	3.71	0.47	Strongly Agree
I can remove the system fan and can detach the power supply from system unit.	3.55	0.55	Strongly Agree
I know how to remove the RAM from the mother board, and install the power supply.	3.72	0.59	Strongly Agree
I know how to install the mother board and the internal drives in a system unit.	3.53	0.56	Strongly Agree
I know how to attach RAM in the memory socket and install CD/DVD drives.	3.22	0.41	Agree
Composite Mean	3.71		Strongly Agree

Impact assessment of computer servicing training in terms of skills was 4.14 (SD=0.68) in opening a computer case, 4.11 (SD=0.57) in connecting the mouse, keyboard and monitor, 3.71 (SD=0.47), if the trainees can apply occupational health and safety precautions, 3.55 (SD=0.55), if they can remove the system fan and can detach the power supply from system unit, 3.72 (SD=0.6=59) in knowing how to remove the RAM from the mother board, and install the power supply, 3.53 (SD=0.56) if they can install the mother board and internal drives in a system unit, and 3.22 (SD=0.41), if know to attach RAM in the memory socket and install CD/DVD drives.

Samuel, (2015) speaking, writing and listening are so important in the role of computer learning, and one can certainly learn how to achieve good communication in the workplace through the computer servicing courses. Without strong listening skills, computer technicians would not be able to gain a good understanding of changes that need to be made to a project and problem solving becomes much more difficult.

Lance, (2013), a good computer servicing learner, notice that the hardware skills will help out with a lot of your drawing work. While most of the work will be done digitally, hand-drawing is still considered a valuable skill in the architectural and

engineering industry. To many employers, the ability to draw represents your creative process and demonstrates raw talent.

Mean and Standard Deviation on the Assessment of Computer Servicing training in terms of Aspiration

Indicators	Mean	Standard Deviation	Remark
Extent to which training meet may expectations.	4.00	0.62	Strongly Agree
Extent to which training helps me in my future career	3.75	0.59	Strongly Agree
Opportunity provided to implement the skills learned.	3.66	0.55	Strongly Agree
Relevance of the training to the current pursued job	4.51	0.47	Strongly Agree
Training helped in getting awareness of the latest trends in software & hardware field	3.52	0.54	Strongly Agree
Opportunity of sharing information	3.51	0.57	Strongly Agree
Help me improve the quality of life of the people I support.	3.72	0.58	Strongly Agree
Inspired me to begin or continue my career as a direct support professionals	3.72	0.60	Strongly Agree
Prepared me to complete my specific job responsibilities	3.11	0.45	Strongly Agree
Composite Mean	3.72		Strongly Agree

Impact assessment of computer Servicing training in terms of aspiration was 4.00 (SD=0.62), for which the training helps in the future career, 3.75 (SD=0.59) for the opportunity provided to implement the skills learned, 3.66 (SD=0.55), if the training is relevant to the current job, 4.51 (SD=0.47), if the training helped in getting awareness of the latest trends in software & hardware field , 3.52 (SD=0.54) if there was an opportunity of sharing information, 3.51 (SD=0.57) if the training helped improve the quality of life of the people they are supporting, 3.72 (SD=0.60) if the training inspired to begin or continue a career as a direct support professionals and 3.11 (SD=0.45), if the training prepare to a complete specific job responsibilities.

The overall mean rating of 3.72 manifest respondents' agreement that the impact assessment on computer servicing training in terms of aspiration was found out to be strongly agree. The responses appear to be homogeneous as shown by the small values of standard deviations.

Mean and Standard Deviation on the Assessment of Computer Servicing training in terms of Economic Status

Indicators	Mean	Standard Deviation	Remark
Meeting daily household challenges	4.04	0.61	Strongly Agree
Increased in wages & probability of remaining in employment	3.71	0.51	Strongly Agree
Access healthcare	3.40	0.42	Agree
Pay for education of my children	3.32	0.47	Agree
Acquire more assets	3.56	0.55	Strongly Agree
Generating empowerment for women.	4.06	0.60	Strongly Agree
Participating meaningfully in community activities	3.09	0.35	Agree
Providing access with entrepreneurial training	3.43	0.48	Agree
Contribute to develop client's capacities in managing business	3.41	0.54	Agree
Opportunity to work abroad	3.65	0.57	Strongly Agree
Composite Mean	3.56		Strongly Agree

Impact assessment of Computer Servicing training in terms of economic status was 4.04 (SD=0.61), for which the training helps in meeting their daily household challenges, 3.40 (SD=0.42) for which, because of training their wages was increased & the probability of remaining in employment, 3.32 (SD=0.47), for which they can now access healthcare for their family, 3.56 (SD=0.55), for which they can now pay for the education of their children, 4.06 (SD=0.60) for which they can now generate empowerment for women , 3.09 (SD=0.35) where they can participate meaningfully in community activities , 3.43 (SD=0.48) for the provision of access with entrepreneurial training, 3.41 (SD=0.54) for which contribute to develop client's capacities in managing business, and 3.65 (SD=0.57) for which the training can help the training to work abroad.

Shamim, (2011) in his study compared learners' socio-economic status of the group of trainees in electronics class where scores in the most recent public examination. He found that learners in the higher income bracket consistently outperformed learners in the lower income bracket. He suggested that the positive correlation of high family income with students' higher levels of proficiency may be attributed to their earlier education in private medium schools compared to students in the lower income bracket.

Aikens & Barbarin (2016) recognized in the process of their investigation that children from low socio-economic environments acquire language skills more slowly, exhibit delayed letter recognition and phonological awareness, and are at risk for reading difficulties.

Computer servicing training was given by the College of Engineering of Laguna State Polytechnic University does not confined for those students who are professional but given the opportunity for the out-of-school youth, as well as the non-professionals who wants to acquire skills and knowledge in Auto-Cad in order to help uplift the economic status of the participants in order to transform lives and communities into a more productive individual.

IV. CONCLUSION

As a higher education institution, the university brings to bear in its extension/ outreach/ service learning programs its expertise in instruction and research. These programs, however, are not a one- way traffic. They are implemented as a result of researches conducted and concepts taught in the classroom. As the university extends its expertise with the partner communities, feedbacks are generated from the stakeholders.

Computer servicing training being offered by the colleges and universities as an extension program to its neighboring communities could be a continuous program that can help the individual to embrace the new trends in technology without enrolling to the formal school. This endeavor given by the educators in the extension service should be realized by the Local Government Unit, for which they will be the middleman in every training provision by the school community.

V. RECOMMENDATIONS

As the over-all coordinating body of the various community extension activities that are initiated by the different sectors of the Laguna community, the community and extension services of LSPU should:

- Participate in constructive and relevant social and technical activities in the promotion of skills training that will the community to uplift their lives.
- .Creation of such extension services to the community should be promoted in active cooperation by the Local Government Unit for an easy access of the trainees.
- Encourage volunteerism among the sectors of the Laguna community for the noble and worthwhile extension activities thereby cultivating the same spirit in the client partner communities.

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