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EIGHTEEN (18) RECIPES IN TECHNOLOGY TRANSFER TRAINING PROGRAM: A CIPP MODEL

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Abstract: **The study utilized the CIPP Model Evaluation to evaluate the 18 recipes of technology transfer training program conducted by Iloilo Science and Technology University-Barotac Campus among trainee-respondents in the five barangays. The 25 trainee-respondents were identified through cluster sampling technique surveyed in the community. Adapted checklist questionnaire for demographic characteristics and extent of implementation of the training program was utilized. Moreover, the experts-made questionnaire for product evaluation was used to determine if there is significant difference in the mean gain scores. The overall extent of implementation of technology transfer training for trainee-respondent was better. Generally, a result of t-test for trainee-respondent was not significant, whereas results for local government unit in the compared means was not significant, and for community, was significant. This simply means that "sex" is not a defining factor in the training program conducted. Pearson r revealed a not significant correlation between the variables. Hence, this 18 recipes technology transfers training give opportunities to trainee-respondents to earn a living as results revealed.**

Keywords: **CIPP model evaluation, higher learning institution, technology transfer training, trainee-respondents.**

1. INTRODUCTION

Rationale:

Extension is one of the functions of higher learning institution. To rationalize the extension function of the institution, ISAT U along with its mission, goals and objectives, promote research and development programs to advance science and technology and undertake sustainable extension activities for the improvement of the quality of life in the community and; to utilize research outputs in enhancing specialized skills, to assist communities in alleviating the status in the life of the people, providing them with competencies to live quality life. CMO 08 Series of 2010, Extension is referred as an act of communicating and transferring knowledge and technology to specific sectors and target clientele to enable them to effectively improve production, community and/or institutions and quality of life, and the same time enhance HEIs academic and research program.

CHED Memorandum No. 8, series 2008, is the act of communicating, persuading and helping specific sectors or target clienteles to enable and effectively improve production, community and/or institutions, and quality of life. Furthermore, Republic Act 7722, otherwise known as The Commission on Higher Education mandates institutions to respond the call for societal transformation.

This was supported by Lim (2011) cited by Laguador, J. M., & Chavez N. H., (2013), broadening the horizon of community extension is an important role of the academic institutions. According to him, community service has been described as "services which are identified by an institution of higher education, through formal or informal consultation with local non-profit, governmental, and community-based organizations, as designed to improve the quality of life for community residents, particularly low-income individuals, or to solve particular problems related to their needs.

Along with this, Ammakiw (2013) stated in his study the speech of former President Gloria Macapagal Arroyo's challenging message during the 14th Annual Convention and General Assembly Meeting of the Philippine Association of Extension Program Implementers, Inc. (PAEPI) that was held last Oct 21, 2002 at the University of Southern Philippines,

Davao on the Theme "Strengthening Research and Extension Linkages and Policy Advocacy for Extension Sector in The Task of Empowering People for Sustainable Development" should be taken seriously when she emphasized that:

> "It is in the area of extension program implementation that our academic institutions have made significant difference in the community. Extension programs are rich sources of wisdom and vast frontier for research, where ideas, concepts and formalities can be put to the test and validated in real life situations and scenarios."

With this, the conjunction and harmonization of this function will strengthen the instructional mandates as stipulated in the 1987 Constitution, Section 2 of Articles XIV on Education, Science and Technology, Arts, Culture and Sports. The Article states that the State shall:

1. Establish, maintain, and support a complete, adequate and integrated system of education relevant to the needs of the people and society.

2. Encourage non-formal, informal, and indigenous learning systems, as well as self-learning, independent, and out-of-school study programs particularly those that respond to community needs.

These sections in Article XIV is supported the "Ten Point Agenda" of President Benigno Simeon Aquino III, that; Science and Technology must be sustained due to its contribution to Human Development of the entire economy. Thus, in industrializing countries like the Philippines, people must be prepared with technological skills and knowledge to improve the socio-economic living condition which is vital to economic growth and development of every nation.

To counter this technological skills and knowledge to improve socio-economic of the people in the service area, the university utilize research outputs to enhance specialized skills, the 18 recipes; an output from researches utilize and conducted to conceptualize technology transfer training program, cookery by the Bachelor of Science Hotel and Restaurant with the experts and faculty in collaboration with local government units, community and students and with the support of the administration.

Along with this, Iloilo Science and Technology University has been committed to conduct the 18 recipes a sustainable extension programs to uplift the social conditions of the trainee-respondents and enhance their skills in cookery.

Thus, this paper attempted to evaluate the extension program of 18 recipes in technology transfer training of the ISAT University- Barotac Campus using CIPP Model Evaluation on demographic characteristics, economic, social and cultural/political background of the twenty five trainee-respondents, skills training needs, process and product. Hence, this study.

Conceptual Framework

This study used Daniel Stufflebeam's CIPP evaluation model (Fitzpatrick, Sanders & Worthen, 2011; Mertens & Wilson, 2012; Stufflebeam, 2003; Zhang, Zeller, Griffith, Metcalf, Williams, Shea & Misulis, 2011). In this decision-oriented approach, program evaluation is defined as the "systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decisions about future programming." The CIPP evaluation model is presented in figure 1. It is a framework for guiding evaluations of programs, projects, personnel, products, institutions, and evaluation systems (Stufflebeam, 2003).

Figure 1: Components of Stufflebeam's (2003) CIPP Model.

The acronym CIPP means context, input, process and product evaluation. The four core concepts are evaluated, with the intention of not to *prove*, but rather *improve*, the program itself. An evaluation following the CIPP model may include a context, input, process, or product evaluation, or a combination of these elements (Stufflebeam, 2003 in Mazur, 2013).

The *context evaluation* creates the big picture of where both the program and evaluation fit (Mertens & Wilson, 2012). This stage assists in decision-making related to planning, priorities and relevance and it also enables the evaluator to identify the needs, assets, and resources of the community in order to provide technology transfer training program that will be beneficial to the people in the service area. Context evaluation also identifies the effectiveness that could influence the success of the program. To achieve this, the evaluator compiles and assesses needs assessment survey variables. Furthermore, the operation of extension services, or some other programs of the institution are guided its objectives, wherein, various and perhaps uncoordinated evaluation efforts have made for monitoring. Such an evaluation would examine the needs of the institution's clients; expose opportunities such as funding programs, advanced educational technologies; assess the efficacy of extension goals and priorities. A context evaluation might also be motivated from outside institution, as when accrediting agency requires a self-study of a funding requires a "needs assessment" as a basis for justifying funding request. Such studies may be targeted on specified areas of concern or focused more generally on a wide range of institutional functions.

Moreover, the results of the context evaluation, ideally, would lead to an effective outcome. Whereas, the methodology of a context evaluation may involve a variety of measurements of the object of interest and various types of analysis. A usual starting point is to get the information of the trainees by conducting needs assessment survey, interview the clients in order to obtain their perceptions of strengths, weaknesses, and problems reasoned why technology transfer training would serve as an intervention. Moreover, a context evaluation may have a number of constructive uses. It may be provide a means by which extension activities gained a shared conception of the beneficiaries strengths, and weaknesses, needs, opportunities, and priority problems. It may be used to convince a funding agency that a proposed project is directed at an area of urgent need or to convince a beneficiary to train in the institution. It might be used to formulate objectives for extension development. Of course, it would often be used to help clientele and unemployed women to enhance their skills for livelihood purposes. These how a context evaluation could assist along community extension programs and projects and set priorities for effectiveness.

Michael Shriven once said that "" evaluation is nervous making," and it is. Goals and objectives are worthy if programs and projects can matched the needs of the people they are intended to serve.

On the other hand, *input evaluation* can be discussed. In this stage, information is collected regarding the mission, goals, and plan of the program. Its purpose is to assess the program's strategy, merit and work plan against research, the responsiveness of the program to client needs, and alternative strategies offered in similar programs (Mertens & Wilson, 2012). The intent of this stage is to choose an appropriate strategy to implement to resolve the program problem.

In addition to context evaluation and input evaluation, reviewing program quality is a key element to CIPP. *Process evaluation* investigates the quality of the program's extent of implementation. In this stage, program activities are monitored and evaluated, documented and assessed by the evaluator (Fitzpatrick et al., 2011; Mertens & Wilson, 2012). Primary objectives of this stage are to provide feedback regarding the extent to which planned activities are carried out, guide staff on how to modify and improve the program plan, and assess the degree to which participants can carry out their roles (Sufflebeam, 2003, in Mazur, 2013)).

The final component to CIPP, *product evaluation*, in this stage the post test was given to assess if training conducted had significant difference that may provide positive effects to trainee-respondents and may also give better outcomes to the institution.

Statement of Purpose

This study aimed to evaluate 18 recipes in Technology Transfer Training using the CIPP Model Evaluation Program in Iloilo Science and Technology- University, Barotac Nuevo Campus, Iloilo City for the School Year 2017-2018.

Specifically, it answered the following objectives:

1. To characterize the trainee- respondents in terms of:

1.1 demographic;

1.2 economic;

1.3 social; and

1.4 cultural/ political factors;

2. To determine the skills training needs of the respondents 18 recipes in Technology Transfer Training Program;

3. To determine the baseline score and post-test scores of trainee-resondents in technology transfer training program?

4. To determine the significant difference between the baseline score and post test scores of the trainees in technology transfer training program.

5. To determine the extent of implementation of the technology transfer training program ;

a. for the trainees

b. for the LGU's

c. for the community

6. To determine the significant difference in the extent of implementation of the technology transfer training program ;

a. for the trainees

b. for the LGU's

c. for the community

7. To determine the significant correlation between main gain score and extent of implementation of the technology transfer training; for the trainees, for the LGU and for the community?

Significance of the Study

The findings of the investigation may be beneficial to the following persons for variety of reasons:

The **trainee-respondents** would benefit out of the results of this study since they are the direct recipient of whatever project or program that will be conceptualized out of the results of this study. An enhancement program will be recommended based on the results of this study.

The **community** would benefit from the results of the study since most of the direct clienteles come from the community. Whatever projects or programs, as offshoots of this study, would always benefit the community.

Stakeholders who were the prime movers in implementing and facilitating the 18 recipes technology transfer training programs and projects, this study will help widen their knowledge to have positive inclination in helping the people in the service area.

Program Implementers, the extensionists or the faculty members will be encouraged to involve in any extension project to provide opportunities to the beneficiaries to enhance their skills and improve their quality of life.

ISAT U as the learning institution will be informed of the results of the community extension program. The university will provide more budget/support to the program and projects extended to the trainee-respondents to enhance their skills in cooking.

The study would be of great advantage and benefit to the **out of school youth and unemployed women** who are the target population of extension services**.** They will be informed of the technology transfer training of the university to enhance their skills for livelihood program.

The evaluation result of the extension program can benefit the r**esearcher** to conduct more study on extension. In the course of the study, the researcher would have adept knowledge of the different research methodologies and being indulged in the study would make the researcher more research-oriented and systematic in all ways. This endeavor could likewise improve the self-confidence and self-esteem of the researcher as she would try to compose herself in the interviews with the stakeholders, trainee-respondents in the training conducted.

The **future researchers** especially the extension coordinators could make use the result of the study by using it as a guide to conduct extension programs and projects in the adopted barangays. The results of the study can also be used by future researchers as a baseline data for their related studies.

Limitations of the Study:

The study was limited to the 18 recipes in technology transfer training program utilizing CIPP Model Evaluation to evaluate the training program of Iloilo Science and Technology University- Barotac Nuevo Campus. The 25 trainee-respondents were identified through cluster sampling technique surveyed in the community. Adapted checklist questionnaire for demographic characteristics and extent of implementation of the training program was utilized. Moreover, the experts-made questionnaire for product evaluation was used to determine if there is significant difference in the mean gain scores. The quantitative interpretations was processed using statistical tool. The data were computer processed using Statistical Package for social Sciences (SPSS) software.

2. REVIEW OF LITERATURE AND STUDIES

Community Extension Services:

Extension is one of the most important functions of the institutions of ISAT U. The University extension units are equipped with expertise, facilities to assist communities and individual to develop their skills to respond to their needs. With this, related literature and studies to support the discussion of this study;

(Fernando, 2000) cited by Laguador, Mandigma & Agena (2013), opines, that, Universities conducted effective programs; to measure the program's effectiveness is based on its capability to manage both situational and national security problems at the same time the four management areas of community participation, technology, funding and institutions (Fernando, 2000) cited by Laguador, Mandigma & Agena (2013). With this statement, ISAT U-Barotac Campus with the mandate of the university facilitated many programs anchored to the goals and objectives of the extension services office.

Similarly, Chua et al, (2014) cited by Laguador, Dotong & De Castro (2014) they said, providing quality products and services is always the ultimate goal of every educational institution making it as a part of the mission, vision that proliferates from top management down to the rank and employees of the organization. In like manners, the university through its extension services office mandated coordinators and faculty members in all curriculum programs to participate in the conduct of extension activities.

This was supported by Chua, V. D., Caringal,K. P., De Guzman, B. R. C., Boroja, E. S. D., zmaguindayao, J. B. & Caiga (2014), they said, social responsibility is being taught in institutions of higher learning through involving the students in community extension projects as part of the threefold function of their respective colleges or universities aside from research and instruction. ISAT U extension services utilizing students to assist whatever programs and projects catered by te institution to the people in the service area.

In the study of Tacbas, B. L., De Vera, M. P., & Romo, Nc. V. (2008) in the implementation of the extension program of the University of Northern Philippines, The study made used of the descriptive survey method of research to describe and analyse the existing situation about the effectiveness of the extension programs of the university. Results revealed in terms of economic and social impacts of the program, out of 188 respondents, 114 or 60.64 percent believed that they were not employed as a result of the skills learned, only 74 or 39.36 percent believed to be employed. Most (123 or 65.42%) of them perceived that their houses were not improved as a result of the income derived from the income generated after the training. It can also be traced that 112 or 59.57 percent of the respondents believed that they were not able to buy appliances as a result of the income generated from the employment as a result of the skills learned. On the contrary, the respondents perceived that their social status have improved in terms of self-esteem, health and nutrition, and environment.

Chiaburu and Tekleab (2005) found that training is significant as long as trainees can anticipate or predict what is obtained after completing the training. It guides the trainees with their participation and commitment during the training and later facilitates the learning transfer at the work environment. In addition, trainees are well informed and possess sufficient knowledge of after technology transfer training conducted. This was supported by another author (Baldwin et al., 2009) that the trainees should be prepared to face the difficulties encountered in the training program.

Anyhow, Kitawi (2014) he examined the issue of community capacity development in a university, according to him, the main way communities were empowered was through the education management programmes offered by the university through different programs. He used the framework of Chaskin's (2001) to examine which issues of community capacity development emerged through the different action research projects students implemented within their communities.

Content and map analysis was the analytical technique which was adopted. The results of the study revealed, it provides insights into how universities in developing countries can develop communities' capacities through higher education. A framework for community capacity development in the field of higher education management is proposed. The main categories were: fundamental characteristics of community capacity, social agencies, and functions of community capacity, enablers, challenges, strategies, and outcomes. These results supported by ISAT U-Barotac Campus, that the institution with extension services head, coordinators and faculty were conducting programs along with the mandate of the university, the programs were catered to those who were unemployed, out of school youth from the five barangays adopted.

Along with this, Liu (2017), in his study community involvement sustainable world heritage; received UNESCO recognition for the Implementation of the World Heritage Convention 2015, participation of communities and individuals that create, maintain and transmit such heritage is given much emphasis that will impact their living conditions and life. Based on Melaka as a case study, the local communities participated in the planning and management of heritage protection and conservation of Melaka as a WHS. A series of consultations and focus group discussions were conducted with the various communities in 2013–2014. The research findings indicate that community participation in the planning and management process is minimal and that the local community is largely excluded from this process. With this, the study had much bearing on the existing functions of the extensions in the university, everyone were involved in the projects and program conducted in order to facilitate well the training transfer that led to beneficiaries uplift their quality of life.

This study attested by (Laguador, Mandigma & Agena, 2013), (Laguador, Mandigma & Agena, 2013). The university could never be recognized as globally competitive if they would not consider the needs and welfare of the people within their boundaries. Sharing of resources to the needy and helping them achieve the quality of life would serve as one of the greatest accomplishments of ISAT U. The core values of the university are very evident in all community projects of every college. ISAT U is an active partner of the residents of the many Barangays in the Province of Iloilo is conducting technology transfer training, along its mandate. To harmonize all the community extension activities of the institution, community extension office were catered many program were stakeholders; the students, faculty members and administrative staff had their share to participate extension programs whereby resources and their expertise were offered.

Ammakiw (2013) on evaluation of extension services program. The findings of this study revealed that the extension programs and services of the Kalinga Apayao State College were "continuing" as supported by the obtained Total Average Weighted Mean of 2.22. It also disclosed that the impact of extension programs and services of the Kalinga-Apayao State College as to political, social, economical, ecological, and cultural was "high" with a Total Average Weighted Mean of 2.41 when the responses of both respondents were taken as a whole. The study further disclosed that there was a significant difference between the responses of the program implementers and the clientele beneficiaries on the impact of extension programs and services of the Kalinga-Apayao State College.

Another study, Contaoi (2003) opines the effectiveness of the extension program of the University of Northern Philippines. Based on the findings, financial capability is also perceived to be at a high level only because there is just enough budgets for implementation. Among the programs, skills training appear to be the most relevant as evidenced by a very high rating. On the other hand, the relevance of information drive and livelihood organizations was only high because they seemed not to be as productive and functional. Only a few clienteles have been employed using the skills they learned.

Similarly, Buemio (2006) opines that, Community Extension Program of Saint Paul College of Ilocos Sur findings revealed, Very High Leadership capability; along executive leadership and other variables. The school has a remarkable agenda along extension services as shown in the administrative capability, the professional and personal characteristics of implementers, and in the participation of development partners. The overall implementation of the program was significantly influenced by administrative capability and executive leadership of having remarkable agenda along extension services, clear goals and objectives, effective planning, implementation, monitoring and evaluation of the program. The economic, socio-cultural, and personal aspects are significant factors in the overall impact of the extension programs.

Diem (2001) believed that a program that addresses the needs identified by the people tends to be more effective if they were participating. Any program must recognize the value of the people's participation starting from the conceptualization phase. This is done by undertaking a community study that would explore the actual concerns of the people. These in turn must be translated into a workable program or project responsive to the identified needs or concerns.

Hasco et.al. (2016), this study was conducted to assess the current Extension program of the Polytechnic University of the Philippines (PUP). Some 74 beneficiaries from the 23 centers of Sta. Mesa, Manila were identified through the use of purposive sampling. The data gathering made use of aided surveys. Weighted Mean and Pearson Product Moment of Correlation was used to treat and process statistical data. Findings revealed that the Extension Services conducted by the PUP Salin Kaalaman Tungo sa Kaunlaran Extension Program (SALIN) were highly effective regarding Information Dissemination, Staff and Officials, Trainings and Programs, Trainers and Speakers, Programs, Accommodation and Venue and the personal impact of the Extension Program to the Beneficiaries. Satisfaction rating on the extension program was also high. Further, this study found out that as respondents are satisfied with the implementation of SALIN, the greater the chance of positive assessment on the effectiveness of the project. The study also disclosed problems and recommendations identified by the respondents. In addressing the research gaps, this study further identified recommendations to enhance capabilities of program implementers such as better execution in the delivery of extension services, fund sourcing and forging linkages or networking.

Summary:

Extension is one of the functions of institutions of higher learning. To rationalize the extension function of the institution, The institution along with its mission, goals and objectives, undertake sustainable extension activities for the improvement of the quality of life in the community and; to respond the call for societal transformation, the related literature and studies from the different authors revealed a very significant to the community and the institution that the extensionist and implementers composed of head, coordinators, staff experts and faculty and stakeholders were involved in all the programs and project implementation. Thus, the university could never be recognized as globally competitive if they would not consider the needs and welfare of the people within their boundaries. Sharing of resources to the needy and helping them achieve the quality of life through technology transfer training program served as one of the greatest accomplishments of ISAT U.

3. METHODOLOGY

Design;

Quantitative evaluation research method employing a CIPP Model was used. This method was utilized to evaluate the context, input, process and product of the 18 recipes in Technology Transfer Training Program of Iloilo Science and Technology- University, Barotac Nuevo Campus, Iloilo for the School Year 2017-2018. The *context evaluation* creates a big picture of where both the program and evaluation fit (Mertens & Wilson, 2012). This evaluation evaluates the variables in the needs assessment such as, demographic characteristics, economic, social and cultural/political aspects from the five Barangays, skill training needs and baseline scores of the trainee-respondents, for process evaluation, the researchers utilized performance indicators-evaluation form to evaluate the implementation training program, and post-test was conducted in terms of product evaluation. The utilization of 18 recipes for technology transfer training program of the university answer the needs of the trainee-respondents;

Environment:

The study was conducted at Iloilo Science and Technology University- Barotac Campus, a subsidized institution of higher learning institution aimed to provide extension program and projects in the entire barangay in the municipality of Barotac Nuevo, Iloilo. The institution located at Jalaud, Barotac Nuevo, Iloilo and the center of the five barangays were the trainee-respondents came from who were involved in the study. These adopted barangays Talisay, Baras, Guintas, Lanas and Guintaba, and Jalaud, Barotac Nuevo, were the recipients of the university of the programs and project offered by extension services office.

Participants:

Out of 125 participated in the survey of the five barangays; twenty five (25) participants were identified through cluster sampling technique.

Instruments:

The instrument was utilized in this study was an adopted instruments from Extension Manual and ISO-QF-ESD-04 needs assessment instrument.

Part One, Demographic Profile of the Respondents, is composed of items as: (1) geographical (2) economics (3) social (4) cultural/political and (5) skills training needs.

Part Two, Pre-test, experts-made, paper and pencil test administered before and after the conduct of 18 recipes for trainee-respondents in technology transfer training program. The instrument constructed based on the training experts procedures and activity in cookery. The experts identified approaches/strategies appropriate to the content and procedures being studied.

In the second parts of the checklist questionnaire, the trainees rated they using choices, shown below, with "yes" or "no".

To determine the impression of the trainee-respondents, local government unit and community of 18 recipes in technology transfer training program, their responses were scored and tallied. The following were used to score each of their responses: often (4 points), better (3 points), good, (2) fair points and poor (1 point). **Better** means the technology transfer training program is delivered well. **Good** means the technology transfer training program is delivered right. **Fair** means the technology transfer training program is delivered only when the situation calls for the execution of the said training or it is executed with reservations. **Poor** means the training is delivered lowly.

On the other hand, the fifty-item multiple-choice constructed by the experts made test covers items to include 18 recipes procedures and activity from the manual.

The researcher-made paper and pencil test was validated by the experts composed of the head and coordinators of extension services of ISAT U-Barotac Campus. The corrections and recommendations of the experts were considered before the final drafting of the instrument. The procedures taken to establish validity of the experts-made paper and pencil test.

Sampling Technique:

In determining the sample of the study, cluster sampling technique was used. Out of 125 participated in the survey using the adapted checklist questionnaire of the five barangays; twenty five (25) participants were identified through cluster sampling technique. Simple random sampling technique after chosen was processed by the researchers in order to give equal participation in the conduct of the study.

Data Gathering:

To collect the data needed for the study, the researchers requested permission from the Campus Administrator of ISAT U-Barotac Campus. The respondents were given a letter and were asked to sign a consent form, which indicates in detail the nature and degree of their participation in the study. Then, the instruments were administered to the trainee-respondents of 18 recipes in technology transfer training program.

For the pre-test, the data gathering will be taken from two measures: the pre-test and post-test. First, a pre-test were given to trainee-respondents to determine and assess their performance prior to the exposure of the training program in 18 recipes. After the administration of the pre-test the trainee-respondents were given an orientation on what they supposed to do during the activity. The training started July 15, 2017 and ended August 23, 2017 a total of 10 days of direct exposure. Posttest was administered after completed the 18 recipes in order to determine if technology transfer training conducted increase in mean scores and skills of the trainee-respondents

Meanwhile, to achieve the desired information from the respondents choices of the skills training program, they results from needs assessment survey were ranked.

Data Analysis

The data gathered for this study were subjected to certain computerized statistics via Statistical Package for Social Sciences (SPSS) software.

Raw scores, means and assigned scales. Raw scores, means and assigned scales were used in determining the demographic profile of the trainee-respondents

Frequency counts and means will be used as descriptive data analysis tools. The t-test is the inferential statistical tool use to determine if there is a significant difference in the trainee-respondents before and after the training of 18 recipes.. The overall ratings is also determined and compared. Significance is set at .05 alpha levels.

Pearson r. The Pearson r used to determine the relationship between mean gain and extent of implementation of technology transfer training program.

Trustworthiness and Ethical Considerations:

Trust is important in every research that concerns conducting/interviewing trainee-respondents or subjects. Prior to the administration of the conduct of the study schedule, the researchers genuinely talked to each subject and disclosed the true nature of the study to get the his or her trust. This would likewise establish rapport with the trainee-respondents so that the veracity of the information given by the interviewee is established.

On the other hand, in the conduct of the study, the researcher took into considerations the ethical issues knowing that the study made use of unemployed and out of school youth as subjects and respondents. To protect the subjects and respondents of the study, the researcher developed trust and confidence with them in order to promote the integrity of the research, guard against misconduct and any impropriety that can be reflected in their institutions, and cope with new challenging problems (Creswell, 2009). The researcher respected their rights, needs, values and desires. Furthermore, the researcher was very careful in asking questions that might solicit sensitive answers or questions about sensitive and personal issues, especially from the subjects.

Establishing Objectivity:

The fact that the results of the study are dependent upon the subjects' and respondents' answers, which are in turn, dependent upon the researcher's interpretation, biases may set in. In order to avoid personal biases in the interpretation of results, the researcher avoided personal interpretations of the subjects' and respondents' answers. She tried to clarify their answers by asking follow up questions. Triangulation of the data and information was likewise done through others informants who could validate the results of the study.

4. RESULTS AND DISCUSSIONS

The section presents the results and discussions of the study. The results are presented in the form of tables according to the objectives of the study.

Characteristics of the Trainee- Respondents of the 18 recipes in Technology Transfer Training Program

This section presents results of the demographic characteristics of the trainee-respondents in terms of age, sex, status of respondents, education, number of family members.

Demographic. Table 1 presents the demographic characteristics of the trainee- respondents of the 18 recipes in Technology Transfer Training Program in terms of age, sex, marital status, education and number of family members.

Table 1: Demographic Characteristics of the Trainee- Respondents of the 18 recipes in Technology Transfer Training Program

Demographic Profile		*f*	%
Age	15-25	10	40.0
	26-35	3	12.0
	36-45	6	24.0
	46-55	4	16.0
	>55 years old	2	8.0
Sex	Male	2	12.0
	Female	23	88.0
Marital Status	Single	11	44.0
	Married	1	4.0
	Widow/er	12	48.0
	Separated	1	4.0
Education	Elementary	0	0
	High School	16	64.0
	College	9	36.0
Number of Family Members	1-3	1	4.0
	4-6	20	80.0
	7-10	4	16.0
	>10	0	0

Note. $n = 25$.

Demographic characteristics of trainee-respondents revealed in terms of "sex", most of the respondents were female, 23 or 89% while there were only 2 or 13% of male were assessed. However, the technology transfer training program catered both male and female.

In terms of "age", 10 or 40% most of the trainees under 15-25 were assessed, followed by under age bracket 36-45 or 24% of the respondents involved in technology transfer training program, whereas, 46-55 or 24% were noted involved in cookery and 20% of trainees under age bracket of 26-35.

In terms of "marital status", 12 or 48% were assessed involved in the training, likewise 11 or 44% trainees who were involved in technology transfer training program, moreover, data revealed, low percentage of married unemployed women involved in the conduct of technology transfer training program.

In terms of "education", results revealed, 16 or 64% of the respondents were high school graduate involved in the training program, and, 9 or 36% of the trainees were college level.

In terms of "number of family members", 20 or 80% were the highest percentage, out of 4-6 members of the family revealed in the data, whereas, 7-10 members of the family with 4 or 16% got second highest percentage among the four brackets, likewise, less number of family members 1 or 4.0 % on family members of 1-3 were assessed in the four barangays during the survey.

Economic. Table 2 presents the economic characteristics of the trainee- respondents of the 18 recipes in Technology Transfer Training Program in terms of the source of income, number of family members working and kind of job.

Table 2: Economic Characteristics of the Trainee- Respondents of the 18 recipes in Technology Transfer Training Program

Economic Factors		*f*	%
Source of Income	Employment	2	8.0
	Business	1	4.0
	None	22	88.0
Number of Working Family Members	1-3	20	80.0
	4-6	5	20.0
	7-10	0	0
Kind of Job	Blue Collared	25	100.0
	White Collared	0	0

Note. n= 25.

The study reveals that economic characteristics are as follows; unemployed trainees had 22 or 88%, whereas, trainees who were involved in business only 1 or 4.0%, and the employed trainees, 2 or 8.0. On the other hand, greater percentage of trainee-respondents who were unemployed.

In terms of "number of working family members", 1-3 members of the family were working 20 or 80%, followed by the trainees who have 4-6 members of the family with 5 or 20% were surveyed, likewise zero percentage of the trainee-respondents on bracket 7-10 were assessed, this revealed that the trainee-respondents were not able to finish their education, most of them were high school graduate and they were involved in fishing and farming.

In terms of kind of job, data shows that, trainees in the blue collared had 25 or 100% percentage, compared to the trainee-respondents in the white collared job were 0 percentages were assessed. It is obvious that all the trainee-respondents were not have permanent job and they need to be trained in the technology transfer training catered by the institution.

Social. Table 3 presents the social characteristics of the trainee- respondents of the 18 recipes in Technology Transfer Training Program in terms of the school, health facility and care providers as well as the transportation.

Table 3: Social Characteristics of the Trainee- Respondents of the 18 recipes in Technology Transfer Training Program

Social Factors	Yes		No	
	f	%	*f*	%
Schools				
• Primary	25	100.0	0	0
• Secondary	25	100.0	0	0
• College	15	60.0	10	40.0

Health Facility				
• Clinic	10	40.0	15	60.0
• Public Hospital	25	100.0	0	0
• Private Hospital	25	100.0	0	0
• Health Center	25	100.0	0	0
Health Care Providers				
• Barangay Health Workers	5	20.0	20	80.0
• Nurse	25	100.0	0	0
• Doctor	25	100.0	0	0
• Midwife	25	100.0	0	0
Transportation				
• Jeepney	2	8.0	23	92.0
• Tricycle	7	28.0	18	82.0
• Trisikad	12	48.0	13	52.0
• None	4	16.0	21	84.0

Note. n= 25.

Social characteristics of the Trainee-Respondents were revealed based on the surveyed data, in terms of schools, most of them 100% were graduated in high school and 60% in college. On the other hand, in health facility, the government provides public hospital, clinic health center and private hospital, most of the trainees affirmed yes of 100%. In terms of health care providers, there were nurse, doctors and midwifery assisted the health issues of the trainees, reflected in the table that, 25 or 100% were catered. In terms of transportation, jeepney, tricycle and trisikad were available in the barangay, most of the trainees affirmed yes as survey conducted.

In sum, less percentage affirmed "no" in the results, all of the categories got 25 or 100% assessed by the extensionists.

The demographic characteristics results supported In the study of Tacbas, B. L., De Vera, M. P., & Romo, Nc. V. (2008) in the implementation of the extension program of the University of Northern Philippines, The study made used of the descriptive survey method of research to describe and analyse the existing situation about the effectiveness of the extension programs of the university. Results revealed in terms of economic and social impacts of the program, out of 188 respondents, 114 or 60.64 percent believed that they were not employed as a result of the skills learned, only 74 or 39.36 percent believed to be employed. Most (123 or 65.42%) of them perceived that their houses were not improved as a result of the income derived from the income generated after the training. It can also be traced that 112 or 59.57 percent of the respondents believed that they were not able to buy appliances as a result of the income generated from the employment as a result of the skills learned. On the contrary, the respondents perceived that their social status have improved in terms of self-esteem, health and nutrition, and environment.

Cultural/ political factors. Table 4 presents the cultural and political characteristics of the trainee- respondents of the 18 recipes in Technology Transfer Training Program in terms of the barangay head, household decision making, and barangay decision maker.

Table 4: Cultural/ Political Characteristics of the Trainee- Respondents of the 18 recipes in Technology Transfer Training Program

Cultural/ Political Factors		*f*	%
Barangay Head	Male	19	76.0
	Female	6	24.0
Household Decision Making	Male	15	60.0
	Female	10	40.0
Barangay Decision Maker	Male	0	0
	Female	0	0
	Collaborative	25	100.0

Note. n= 25.

The cultural and political characteristics discussed in terms of the Barangay Head, Household Decision Makin and Barangay Decision Maker, results revealed that in terms of cultural/political characteristics of the trainee-respondents, most of the barangay head were males 19 or 76%, while 6 or 24% were females this described that, out of the five barangay surveyed, the barangay heads were all males, and few were females as barangay council members.

In terms of household decision making, 15 or 60% dominated by males and 10-40% by the females, it means that, most of the people believed that male is powerful to handle decision making for the good of the family.

In terms of Barangay decision maker, male and female got zero percentage, as validated by the local government officials in the barangay, both the male and the female collaboratively decide matters in the barangay were 25 or 100% results reflected in the table.

In sum, barangay head, household decision making were dominated by males except barangay decision making were both male and females got no scores. It implies that collaborative decisions making should be done for the good of the community.

Skills Training needs of the Trainee- Respondents of the 18 recipes in Technology Transfer Training Program

Table 5 presents the skills training needs of the trainee- respondents of the 18 recipes in Technology Transfer Training Program in terms of the barangay head, household decision making, and barangay decision maker.

Table 5: Skills Training needs of the Trainee- Respondents of the 18 recipes in Technology Transfer Training Program

		Yes		No	
Ranking of the Skills Training Needs		*f*	%	*f*	%
1.	Cookery	22	88.00	3	12.00
2.	Haircutting	13	52.00	12	48.00
3.	Flower Making	12	48.00	13	52.00
4.	Manicure/ Pedicure	11	44.00	14	56.00
5.	Dressmaking	10	40.00	15	60.00
6.	Computer	10	40.00	15	60.00
7.	Handicraft	9	36.00	16	64.00
8.	Landscaping	8	32.00	17	68.00
9.	Art Workshop	7	28.00	18	72.00
10.	Welding	6	24.00	19	76.00
11.	Automotive	5	20.00	20	80.00
12.	Refrigeration	5	20.00	20	80.00
13.	Appliance Serving	5	20.00	20	80.00
14.	Electrical	4	16.00	21	84.00
15.	Overhauling	3	12.00	22	88.00

Note. n= 25.

Table 5 shows the number of programs offered for technology transfer training reflected in the table, out of 15 programs offered by extension services office of the university, data revealed that, there were five skills training program got the highest ranked; for cookery, 22 or 88% was the highest percentage, second is haircutting with 13 or 52% percentage, while flower making 12 or 48 % percent affirmed to offer for training program , on manicure/pedicure, 11 or 44% were the percentage, whereas, in terms of dressmaking, 10 or 40% got the fifth ranked.

However, items from 6 to 15 training needs conducted, results revealed that, few were scored or affirmed to conduct, whereas, in terms of computer literacy training, 10 or 40% of the trainees affirmed to be conducted; likewise, handicraft got a less percentage of 9 or 36%, respondents wanted to train skills training on handicraft.

Meanwhile, landscaping got lower percentage compared to computer literacy, 8 or 32% affirmed to be conducted, for the artwork, there were 7 or 28% from the respondents assessed to be conducted, however, in terms of welding, there were only 6 or 24% affirmed, for automotive, refrigeration and appliance serving, the same numbers of trainees affirmed the program to be conducted, were males, 5 or 20% wanted to train for the tree programs. For electrical skills training program, only 4 or 16% were affirmed to involve in the program, and the least skills training program assessed by the respondents 3 or 12% eager to train the said skills training program as reflected in the table.

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In sum, out of 15 skills training programs offered by the University extension services office, there were five programs; cookery, hair cutting, flower making, manicure/pedicure and dress making ranked highest percentage to cater the needs of the trainee-respondents.

Table 6: t-test Results on the Pre-Test and Post test Scores of the Trainee-respondents in Technology Transfer training Program

Category	Mean	SD	Description
Pre-Test	14.3200	3.41223	Fair
Post-Test	38.4800	3.86350	Very Good

The results showed that there were 25 or 100% trainee- respondents obtained "Fair", before the technology transfer training program was conducted. Whereas, none of the trainee- respondents obtained an "Excellent" but "Very Good" performance after the technology transfer training program was conducted. This implies that technology training conducted by the university was very effective as reflected in the table.

Table 7: t-test Computations of the Difference of the Pre-Test and Post-test of the Trainee-Respondents in Technology Transfer Training Program

Compared Means	df	t-value	Two-Tail Prob	Interpretation
Pre-Test Post-Test	24	-23.974	.000*	Significant

Employing the machine – processed paired t-test, a significant difference was noted in the pre-test and post test scores of the trainee- respondents in the technology transfer training with ($t = -23.974$, $p < .05$) hence, the null hypothesis was accepted.

Table 8: Extent of Implementation of the 18 Recipes in Technology Transfer Training Program for Trainee-Respondents

Variables	Mean	SD	Description
The training is relevant to the needs of the client's	3.7600	.043	Better
The participants are properly informed of the mechanics of the training	3.7600	.043	Better
Delivery of the topic contents by resource persons	3.7500	.0.44	Better
Systematic skills demonstration	3.8400	.037	Better
Properly guided workshop	3.8400	.037	Better
Venue is suitable for the training	3.8800	.033	Better
Food served is within the budget	3.8800	.033	Better
Adequate training materials	3.8800	.033	Better
Active interaction of the participants	3.8400	.037	Better
The training/service is delivered on time	3.8400	.037	Better
Total	**3.8120**	.022	**Better**

N=25

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In the study, the researcher determined the extent of implementation of the 18 recipes in technology transfer training program for trainee-respondents. As revealed in the results, the technology transfer training program for trainee-respondents, in general, had "better" implemented. Looking at results in Tables 8, it is found out that technology transfer training program for trainee-respondents scored the highest in all the item that says, "the training is relevant to the needs of the client's, (mean = 3.7600, sd = 0.43). This is also backed up by another statement "the participants are properly informed of the mechanics of the trainings", (mean= 3.7600, sd = .043). In terms of "delivery of the topic contents by resource persons", (mean= 3.7500, sd = .044). On the other hand, statement "systematic skills demonstration", (mean= 3.78400, sd = .037). Another statement to back up the implementation of the program "properly guided workshop", (mean= 3.78400, sd = .037). Venue is suitable for the training, had (mean= 3.88400, sd = .033). On the statement "food served is within the budget", (mean= 3.8800, sd = .033). moreover, statement "adequate training materials", (mean= 3.8800, sd = .033) described as better. "Active interaction of the participants", (mean= 3.8400, sd = .037). The researcher believes that this aspect is very observable—the reason why all the experts were impressed on this aspect, (mean= 3.8400, sd = .037). Finally, the statement "the training/service is delivered on time", (mean= 3.8400, sd = .022).This means that all the statements for trainee-respondents on the implementation of technology transfer training program were better. .

Table 9: Extent of Implementation of the Local Government Units of the 18 recipes Technology Transfer Training Program

	Variables	Mean	SD	Description
1.	Coordinates with local residents, business and other government functionaries for possible	3.6400	.049	Better collaboration.
2.	Conduct consultative meetings and/or dialogues with stakeholders on priority plan supporting their needs.	3.6400	.049	Better
3.	Regularly meet concerned sector to discuss ways in which the extension undertaking can create better working environment, and full cooperation and participation.	3.6800	.048	Better
4.	Establishes with local/national agencies for possible funding of extension undertakings (sourcing of funds).	3.7200	.046	Better
5.	Communicates directly, openly, honestly and shares information with the concerned sectors, and considering comments, and suggestions for necessary.	3.7600	.044	Better
	Total	**3.6880**	**.022**	**Better**

N=25

In the study, the researcher determined the extent of implementation of the 18 recipes in technology transfer training program for local government units. As revealed in the results, the technology transfer training program as perceived by the local officials, in general, described "better" implemented. Looking at results in Tables 9, it is found out that technology transfer training program assessed by local government units scored the highest in all the item that says, "coordinates with local residents, business and other government functionaries for possible collaboration" , (mean = 3.6400, sd = 0.49). This is also backed up by another statement "regularly meet concerned sector to discuss ways in which the extension undertakings can create better environment, full cooperation and participation", (mean= 3.6400, sd = .049). In terms of "establishes with local/national agencies for possible funding of extension undertakings (sourcing of funds)", (mean= 3.6800, sd = .048). On the other hand, statement "communicates directly, openly, honestly and shares information with the concerned sectors and considering comments, and suggestion for necessary", (mean= 3.6900, sd = .022). This means that all the statements for trainee-respondents on the implementation of technology transfer training program were better. .

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Table 10: Extent of Implementation of the Community of the 18 recipes Technology Transfer Training Program

Variables	Mean	SD	Description
The training is relevant to the needs of the clients	3.8000	.040	Better
The participants are properly informed of the mechanics of the training	3.8000	.040	Better
Delivery of the topic contents by resource persons	3.7600	.043	Better
Systematic skills demonstration	3.7200	.045	Better
Properly guided workshop	3.8800	.033	Better
Venue is suitable for the training	3.6800	.047	Better
Food served is within the budget	3.7200	.045	Better
Adequate training materials	3.8800	.033	Better
Active interaction of the participants	3.8000	.040	Better
The training/service is delivered on time	3.8000	.041	Better
Total	**3.7840**	**.060**	**Better**

N=25

In the study, the researcher determined the extent of implementation of the 18 recipes in technology transfer training program for community. As revealed in the results, the technology transfer training program as perceived by community, in general, had "better" implemented. Looking at results in Tables 10, it is found out that technology transfer training program assessed by the community scored the highest in all the item that says, "the training is relevant to the needs of the client's, (mean = 3.8000, sd = 0.40). This is also backed up by another statement "the participants are properly informed of the mechanics of the trainings", (mean= 3.8000, sd = .040). In terms of "delivery of the topic contents by resource persons", (mean= 3.7600, sd = .043), meaning, the implementation of the training program was implemented as results revealed . On the other hand, statement "systematic skills demonstration", (mean= 3.7200, sd = .045). Another statement to back up the implementation of the program "properly guided workshop", (mean= 3.88400, sd = .033). Venue is suitable for the training, had (mean= 3.6800, sd = .047). On the statement "food served is within the budget", (mean= 3.7200, sd = .045). Moreover, statement "adequate training materials", (mean= 3.8800, sd = .033) described as better. "Active interaction of the participants", (mean= 3.8400, sd = .040). The researcher believes that this aspect is very observable—the reason why all the experts were impressed on this aspect, (mean= 3.8400, sd = .041). Finally, the statement "the training/service is delivered on time", (mean= 3.7800, sd = .060). This means that all the statements for trainee-respondents on the implementation of technology transfer training program were better. .

Table 11: Difference in 18 Recipes in Technology Transfer Training for Trainee-Respondents as to Sex.

Compared Means	df	t-value	Sig.(2-tailed)	Interpretation
Male Female	23	.241	.812	Not Significant

t-test results shows no significant difference in the 18 recipes technology transfer training for trainee-respondents when grouped as to sex with t-value= .241, p = .812. The probability of .812 was greater than .05 alpha levels, null was accepted. This implies that "sex" is not a determining factor in the 18 recipes technology transfer training program for trainee-respondents conducted by the university, male or female trainee-respondents have the same degree when it comes to the training program.

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Table 12: Difference in 18 Recipes in Technology Transfer Training for Local Government Units as to Sex.

Compared Means	df	t-value	Sig.(2-tailed)	Interpretation
Male Female	23	.437	.666	Not Significant

t-test results shows no significant difference in the 18 recipes technology transfer training for trainee-respondents when grouped as to sex with t-value= .237, p = .666. The probability of .666 was greater than .05 alpha levels. Therefore null hypothesis is accepted. This means that "sex" is not a defining factor in 18 recipes technology transfer training as perceived by the local government units.

Table 13: Difference in 18 Recipes in Technology Transfer Training for Community as to Sex.

Compared Means	df	t-value	Sig.(2-tailed)	Interpretation
Male Female	23	2.405	.025	Significant

t-test results shows there is significant difference in the 18 recipes technology transfer training for community when grouped as to sex with t-value= 2.405, p = .025. The probability of.025 was less than .05 alpha levels. This implies that, technology transfer training program of 18 recipes assessed by the community was significant in terms of sex. Null hypothesis is rejected. This simply shows that "sex" was a defining factor in the 18 recipes in technology transfer training for trainee-respondents.

The result supports the study conducted by Ammakiw (2013) on Evaluation of Extension Program. In this study, it was found out that the extension programs and services of the KalingaApayao State College were "continuing" as supported by the obtained Total Average Weighted Mean of 2.22. It also disclosed that the impact of extension programs and services of the Kalinga-Apayao State College as to political, social, economic, ecological, and cultural was "high" with a Total Average Weighted Mean of 2.41 when the responses of both respondents were taken as a whole. The study further disclosed that there was a significant difference between the responses of the program implementers and the clientele beneficiaries on the impact of extension programs and services of the Kalinga-Apayao State College.

Table 14: Relationship between 18 Recipes in Technology Transfer Training Program For Trainee-Respondents and Mean Gain Scores

Variables	r	Sig.(2-tailed)	Interpretation
Mean Gain vs TTT for Trainees	-.223	.283	Not Significant
Mean Gain vs TTT for LGU	-.155	.461	Not Significant
Mean Gain vs TTT for Community	-040	.851	Not significant

Pearson r results revealed, no significant relationship exists between the technology transfer for trainees and mean gain in the 18 recipes training program conducted by the university, with r = -.223, p = .283. The probability of .283 was greater than .05 alpha levels. Thus, the null hypothesis stating that there was no significant difference exists between trainee respondents and the mean gain, null hypothesis was accepted.

Whereas, results revealed, no significant relationship exists between the technology transfer training for local government units and mean gain in the 18 recipes training program assessed by the local government units conducted by the university, with r - -.155, p = .461. The probability of .461 was greater than .05 alpha levels. Thus, the null hypothesis stating that there was no significant difference exists between local government unit and the mean gain, null hypothesis was accepted.

On the other hand, results revealed, no significant relationship exists between the technology transfers for community and mean gain in the 18 recipes training program conducted by the university, with r = -.040, p = .851. The probability of .851 was greater than .05 alpha levels. Thus, the null hypothesis stating that there was no significant difference exists between community and the mean gain, null hypothesis was accepted.

5. CONCLUSIONS

The 18 recipes in technology transfer training program of ISAT U-Barotac Campus were processed by CIPP model evaluation. Hence, the better extent of implementation and skills performance demonstrated by trainee-respondents are influenced by their technological skills and knowledge from the training conducted by the institution. Finally, this indicates that the generated hypothesis contributed to the success of the training program where the skills of the trainee respondents were enhanced that made them ready to secure the livelihood as the source of their future income. Hence, we recommend that the university through extension services office should support to sustain extension activities of the institution. Furthermore, linkages such as national and international should be tapped to support the university extension projects.

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